

GRAIN & FEED JOURNALS

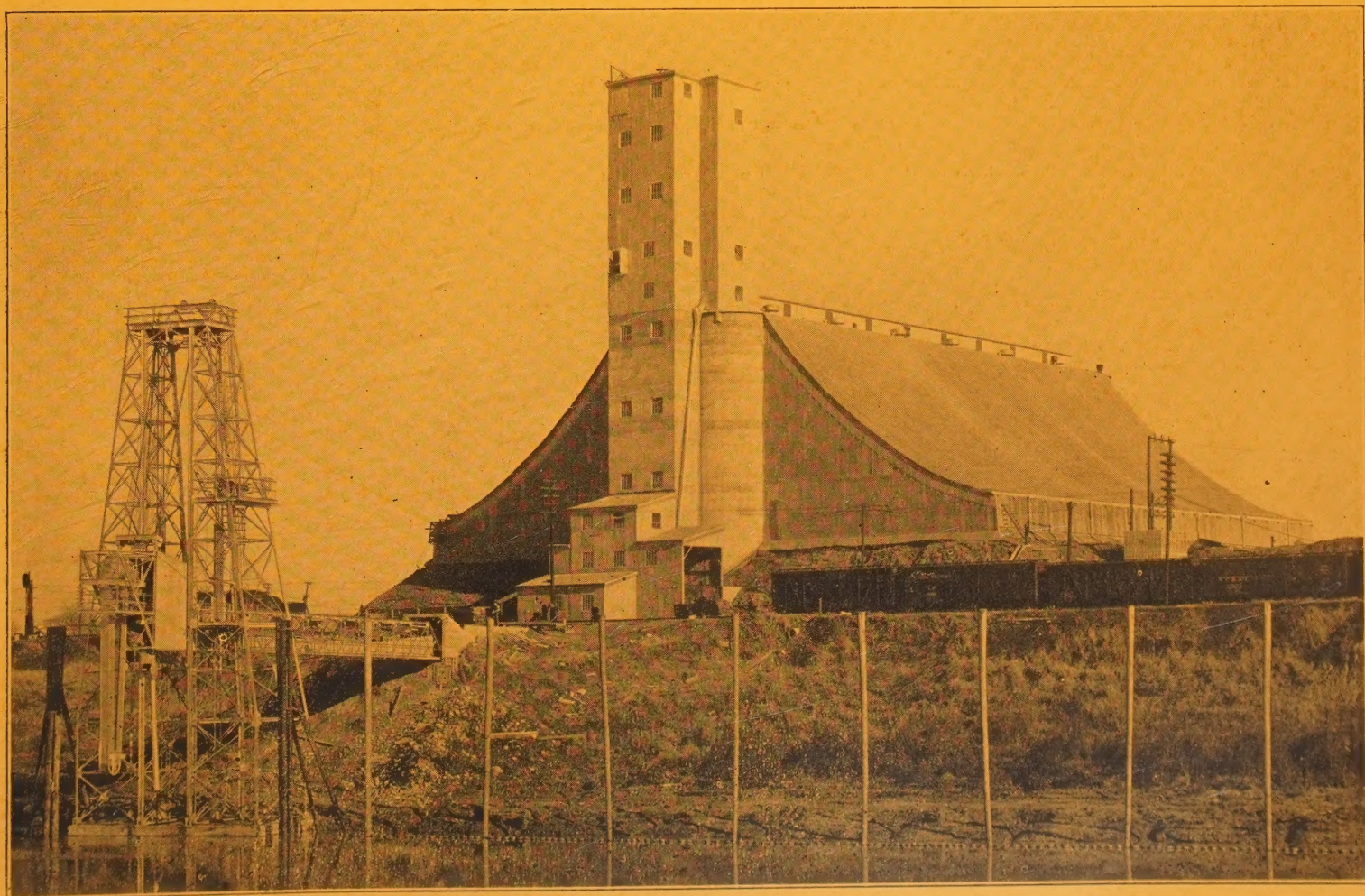
CONSOLIDATED

A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter

In This Number

Wrecking Your Own Railroad
Interrelationship of Grain at Various Points
Recovery of Stolen Wheat
Ticket Must Be Surrendered by Holder
Demanding Delivery
Utilization of Wheat, Corn and Oats
A. C. Barbeau Passes On
Natural Oats Should Not Be Graded Cereal

The World Ponders the Wheat Problem
Nat'l Ass'n Appoints Truck Committee
Grade Changes Effective Oct. 1 and July 1
Economical Use of Milk in Poultry Ration
Commercial Seed Corn Drying
Hybrid Corn First Generation Only
New Oats and Barley Varieties



1,050,000 Bus. Fireproof Elevator of the Memphis Harbor Commission Operated by Cargill, Inc.
[For description see page 241]

Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.

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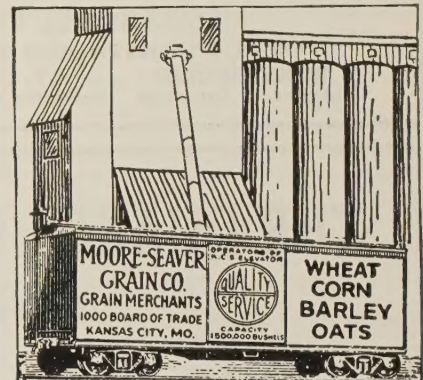
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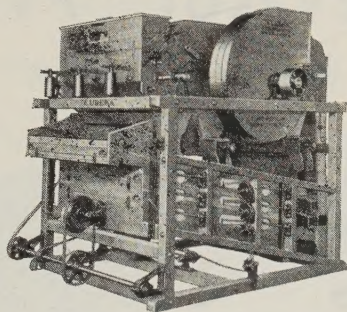
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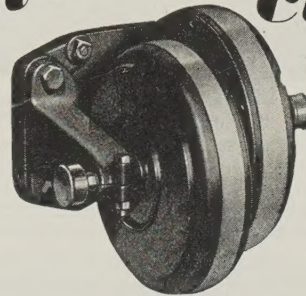
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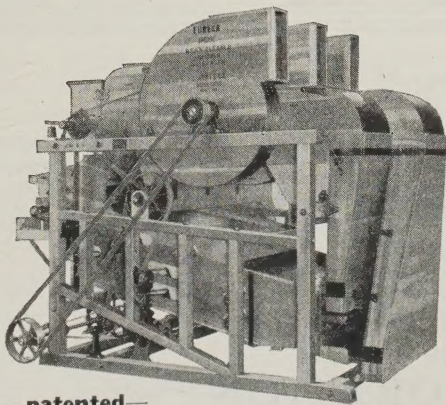


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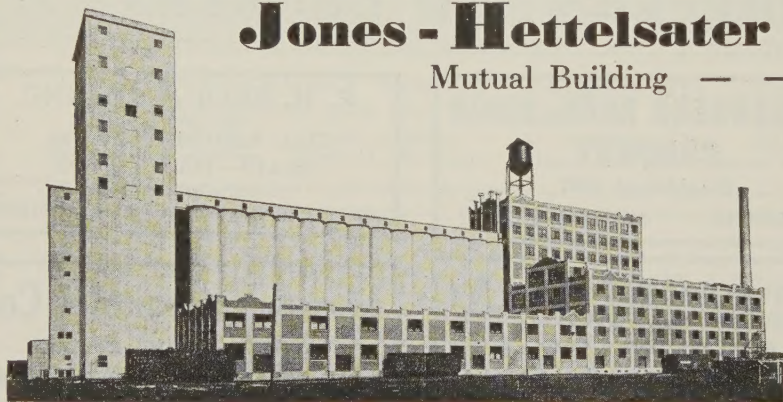
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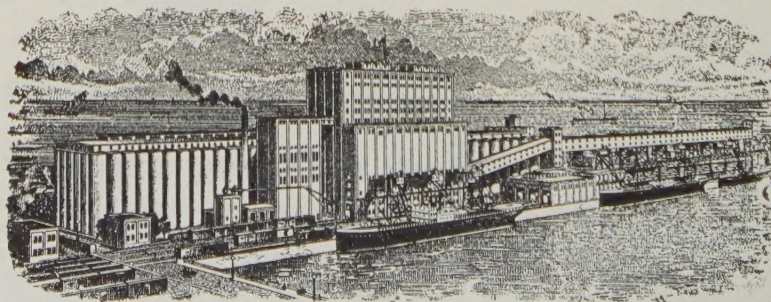
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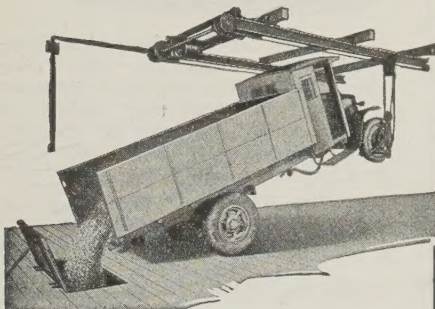
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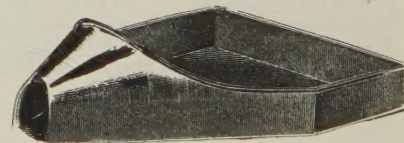
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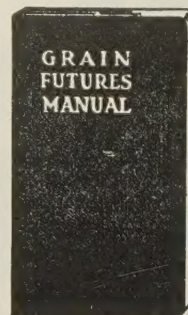
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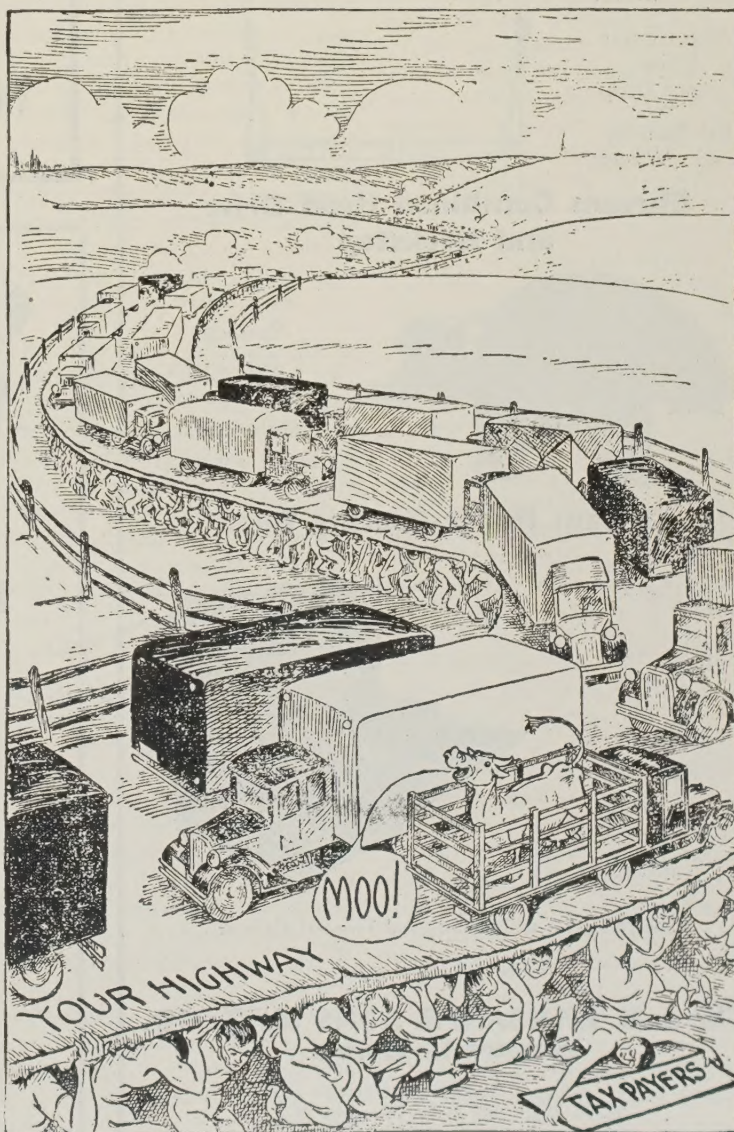
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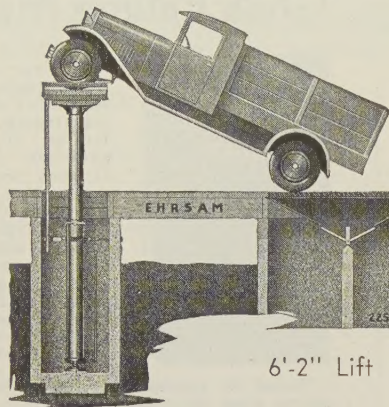
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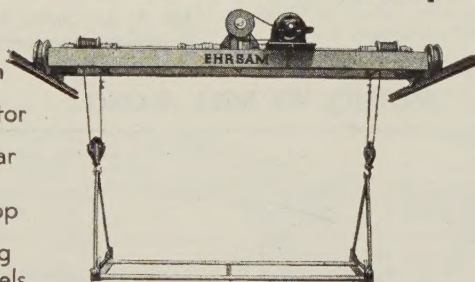
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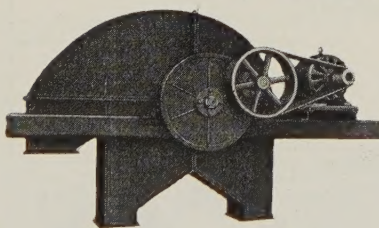
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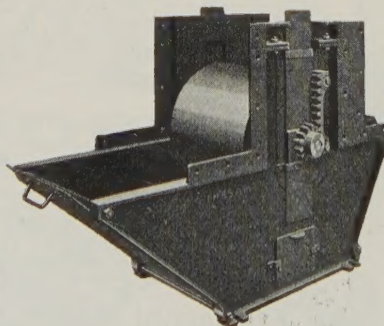
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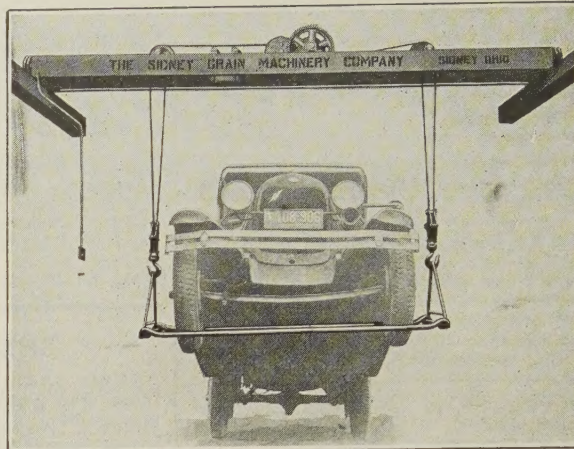


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Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., MARCH 24, 1937

DO YOU change your posted bids for grain with each change in your nearest market or wait for the close of the market?

WHEN the AAA was knocked into a cocked hat, wisecracks freely and persistently predicted 6-cent cotton and 36-cent wheat, but hungry buyers are eagerly paying \$1.36 for wheat and 14 cents for cotton.

THE COUNTRY grain merchant who operates a line of trucks for serving his farm patrons and for marketing his purchases has little to fear from the roving peddlers who strive to cheat or swindle everyone daring to deal with them.

THE EVER NORMAL granary has the fatal flaw of ignoring the fact wheat is harvested in some part of the world every month of the year. It is absurd to maintain a reservoir for a commodity that is inexhaustible, and to do so in a land producing a surplus.

PLACING a belt on a fast running pulley has whirled another Indiana elevator man into eternity. So many workers have tried this feat disastrously it is time all running machinery in grain elevators be safeguarded so workmen can not get near while it is running.

CROP INSURANCE that puts the federal government into competition with private enterprise in storing wheat can not be recommended as a legitimate governmental activity. Governmental activities that drive private entrepreneurs out of business prevent them from making the profits needed to pay taxes and to buy government bonds.

IN COUNTIES now growing white corn grain dealers are urged to have farmers increase their acreage. The percentage of white corn reaching the markets is small and unequal to the demand from millers and brewers. At Omaha, for example, from July 1 to Oct. 1, 1936, the premium on 100 cars averaged 8 cents per bushel over yellow corn.

WRITTEN contracts with growers for the sale of grain at a stipulated price has stimulated the memory of many farmers and helped buyers to ship grain as they contracted. Oral contracts and rising markets encourage farmers to forget their sales and bias their consideration of their liability on their agreement. Clearly stated written contracts accompanied with the payment of earnest money prevent disputes, differences and the loss of customers.

BURGLARS recently visited at a Bentley, Illinois, elevator and made away with a lot of clover seed, Funk's seed corn, an adding machine, and motor oil and gasoline. While it is not practical for every elevator operator to maintain watchman service throughout the year, it pays well to keep the office and warehouse strongly barred against prowlers and whenever a large stock of expensive seed is on hand, a night watchman provides cheap protection.

BULKHEAD SHIPMENTS are always expensive for the elevator operator, even though he is charged only a nominal fee by the railroad carrier for cleaning out his various bins at the end of his shipping season, but when railroads insist on charging \$5.00 per car for material for building a bulkhead, and \$5.00 for the privilege of installing a bulkhead, then it is time that shippers were protesting just as several did protest at the recent meeting of the Minnesota elevator operators. Truckers make no charge for bulkheads. No one likes to handle a bulkhead shipment even though it is his own grain, but it is all important that all bins be cleaned occasionally in order that the elevator operator may check up his house and discover how much more grain he paid for than he shipped.

THE MANY changes made in grain handling machinery in recent years make it imperative that each prospective improver look about before selecting new equipment for his elevator lest he buy obsolete or undesirable equipment. It pays to keep posted.

A NEW YORK milling company which bought "Syanofume D. Dust" to rid its plant of mice and rats, discovered much to its chagrin, to learn that its sure cure relief was nothing more than a cheap grade of flour, and sustained rather than killed the rodents. While the package was surrounded with a very neatly printed wrapper, the factory of the company credited with its manufacture could not be found. Patronizing strange travelers of no known business address has resulted in many credulous grain dealers being swindled out of their hard earned cash.

AN IOWA ELEVATOR OPERATOR who recently failed to collect several large rubber checks traveled into Missouri hoping to catch up with the sharpers who had swindled him. The result of his investigation along the way should help to warn all against having any business dealings with traveling peddlers. He writes, "I never dreamed of so much fraud and robbery being perpetrated as I discovered on my trip. Truckers bragged about the sharp practices employed to beat the grain growers and dealers of Iowa and Illinois." So many elevator operators have suffered from the dishonest trickery of these sharp traders in the marketing of the last corn crop, we doubt that others will be caught by the same tricks when the next crop starts to market.

LOOK OUT FOR this rubber check artist! Grain dealers have been imposed upon by so many driving fakers, truckers, fire extinguisher repair "experts" and other swindlers, we know they will soon be visited by "Ben Wilson," who telephones an order for lumber, or other merchandise, to be delivered C.O.D. Then, he leaves a rubber check with the housekeeper for double the amount of the purchase, and instructs her to give the check to the man who delivers the goods, as soon as he gives her the correct amount of change due. He learns the price of his merchandise over the phone, and instructs the happy merchant to send cash change for a twenty or a fifty dollar bill, as his needs may dictate. Of course, the bank never heard of the individual who is supposed to have signed the check, but "Ben" has been traveling eastern Iowa, dressed in a blue zipper jacket, blue trousers, black hat, and in a new automobile. He is about 5 ft. 7 in. tall, thirty years old, has black hair, and blue eyes. Look out for him! He does not care what you charge him for feed, seed, or what have you.

PROSECUTIONS under the food and drugs act in the latest report mention two firms of unblemished repute as charged with adulteration. The fact in both cases is that there was no adulteration. The 360 bags of feed and grain in one shipment and the 700 bags of corn gluten feed in the other got into a flood in the spring of 1936. As might have been expected mold and bacteria got in their work with consequent decomposition, contrary to the will of the shipper. The goods were ordered destroyed and no fine was imposed on the shipper, nor on the weather man who ordered the flood that spoiled the feed.

BILLS requiring the state registration of trade marks have been defeated in several states recently, but due to selfish activity of a band of lawyers specializing in trade marks similar legislation is pending in other state legislatures. Wholesalers of field seeds and manufacturers of feed owe it to themselves to defeat all such useless legislation. Registration in Washington is enough to prevent duplication or infringement, and that is all that is needed. If the fee-chasing lawyers had their way it would soon be necessary to register each trade mark in every county where used.

THE GRADING schools held at La Fayette under the auspices of Purdue University, the Indiana Grain Dealers Ass'n and the Federal Supervisors have been given such pleasing patronage by the grain dealers of Indiana several two-day sessions will soon be held in different sections of the state and more of the Hoosier dealers will soon be buying and selling grain by the standard grades. The changes recently announced in the grading rules should make it more profitable than ever for country shippers to learn how to grade their purchases. Grain bought right is half sold.

Change in Corn Sieve Desirable

The farmers producing the corn and the central market dealers warehousing the corn seem to have made out a good case for the desired change in the perforations of the sieve used in grading corn.

The smaller, 10/64 inch opening will retain more of the valuable larger pieces of broken kernels to go into the higher grades. The farmer's interest is twofold. First he gets more feed value; and second, the buyer of his corn can afford to pay more for it by about 2 per cent. This seems a small benefit, but when corn is selling at around \$1 per bushel, as at present, it means 2 cents more per bushel to the farmer hauling to the country station.

Let us not forget that the proponents of the smaller opening couple it with the use of a 6/64 sieve to take out the objectionable fine, floury particles, making the corn so graded safe to store.

Unusual Shrinkage in Ear Corn

Many country dealers who are accustomed to buying corn on ear and shelling it, have reported an unusual shrinkage on the last crop. One Illinois dealer who bought, shelled and shipped 41,000 bushels during the first three months of the corn shipping year, reported a shrinkage of 923 bushels or about 2¼%. While none have ventured a guess as to the cause of their unusual shrinkage, doubtless heavy and large cobs had something to do with it.

It used to be the practice with many Ohio dealers to tie up in bags an even weight of ear corn at the beginning of the crop movement each year, then weigh each bag of grain at regular intervals keeping it in the warm office between weighing dates, and thereby determining the shrinkage to be expected in shelling their early purchases.

Paying corn prices for water on the present market is exceedingly expensive and unless buyers discriminate more sharply against ear corn containing excess moisture, they are not likely to realize a profit from the marketing of the crop.

The Bull Market

We are enjoying a bull market in wheat at the present time in one sense only, that prices are mounting higher and higher each week. All the other concomitants of the old-fashioned bull market are absent.

The price of wheat is in a state of unstable equilibrium between scarcity abroad and promise of plenty at home.

Reflecting the shortage in Europe and the dwindling supply of Argentina the futures quotations of Liverpool and Buenos Aires are making new high records for the season, while the Chicago July and September futures sink back after a bulge on each morning's stimulating cables.

The foreign strength is based on the statistical situation abroad, with which American speculators are less familiar than they are with the big winter wheat acreage, rains in the Southwest, all night rain in South Dakota, and the long range forecasts of no drouth this summer. The effect is that instead of leading the advance the American markets are trailing behind. The volume of trade in our futures markets is not booming as it should. Instead of increasing speculative interest on the advances there is steady selling out. At the close preceding the rise to \$1.40 for May wheat Mar. 10, the open interest in wheat futures was 112,163,000 bus.; but after the bulge to \$1.41½ the open interest fell to 109,648,000. In other words nearly 5,000,000 bus. long wheat was sold out from Mar. 16 to Mar. 22.

The obvious remedy for this condition is for American speculators to get into closer touch with the foreign situation.

Wrecking Your Own Railroad

Handicapping transportation agencies handicaps small towns. It is indeed unfortunate, though true, that the average representative from the country districts in State legislatures is ever willing to regiment and regulate the railroads, overlooking the fact that any handicaps to the transportation companies serving their own communities work to the disadvantage of that community.

All laws limiting the length of trains, the size of train crews or unreasonably regulating railroad operation handicap the railroads and make operation so expensive that some lines, some trains and some services must be discontinued, because the receipts from the service rendered small communities do not reimburse the railroads for its expenses incurred in the service.

So many branch lines and unprofitable lines of railroad have been discontinued during the last five years (8,689 miles), it should at least help to open the eyes of thoughtful citizens served by carriers under similar conditions. During 1936 only 93 miles of new railroad were constructed, while 1523 miles were abandoned.

It is easy for the average country merchant to discover that the trucker peddler is undermining his business, but he overlooks the fact that the same peddler is also undermining the business of the rail carrier.

When a branch line, or an entire railroad, as in the case of the M. & St. L., was about to be abandoned, the owner of 80 elevators quickly recognized their complete dependence on rail transportation for the continuance of their business.

Fifty years ago, the coming of a new railroad was always rewarded with a right-of-way, and sometimes a liberal bonus, because the citizens hailed it as a new outlet to the outside world. The coming of paved highways, heavy trucks and speedy passenger cars has blinded the public to their dependence on the rail carriers for cheap and reliable transportation.

While many communities have sufficient business to give liberal patronage to all means of transportation, none can expect to be continued as a favored station of any line of railroad unless sufficient patronage is given the railroad to justify its maintenance.

Elevator owners who are dependent upon rail carriers for marketing their grain can help to insure the continued operation of their railroad by informing their representatives in the State legislature of the urgent needs of the community. Unreasonable regulation and limitation of the railroad not only makes it difficult for its continued operation, but in many cases, results in the tearing up of the rails.

Unscientific Grading Appliances

Accuracy in measurements and weights is a settled practice in chemistry. The chemist can weigh the molecule and the atom; and he can determine the moisture content of a sample of grain, by a method that can not be disputed. The accurate chemical method is to leave the sample in an air oven, heated to a moderate degree, until it no longer loses weight. This takes so very much time that the compromise method of heating the grain in an oil bath was justified to get a quick determination.

Altho under certain conditions the oil bath test differed from the oven test its use was warranted for the further reason that when operated as instructed by the federal grain supervision, uniform results are obtained from the same machine and from different machines in different cities operated by different inspectors. In other words, this Brown-Duvel moisture tester is a perfectly fair device as between buyers and sellers.

This is not true of the federal grain supervision's more recent adoption, the sieve driven by an electric motor instead of, as formerly, shaken by hand. Two indictments are offered against the motor driven dockage sieve, especially when used to sieve corn to separate the broken particles.

First: The motor drive is more thoro and works more of the broken corn thru the perforations. An inspector using the hand sieve can not get the same results as obtained from the machine, resulting in a lack of uniformity in different inspection offices.

Second: Two different motor-driven machines, altho constructed with meticulous care, will not give identical results on the same sample. We can leave it to the mechanical experts to discover the reason or reasons; but it is a fact, nevertheless. As long as this lack of uniformity is possible an improvement might be effected by calibrating each machine in comparison with a hand sieve before leaving the factory, and every three months in the inspection office where used, and to make such adjustments or calculations as will yield results identical with the standard hand sieve.

As an effective check on performance it might be possible to permit the use of the mechanical motor-driven separator, but require appeals to be decided on the hand sieve.

Many grain offices would prefer to have the department rescind its use of the mechanical motor-driven separator, for the reason that it is rather costly for the small grain office. It does not seem reasonable to require investment in an electric moisture meter and motor-driven sieves when reliable results can be obtained less expensively.

Seeding Time

With spring comes renewed interest in the soil and in seeding. The beginning of another planting and growing season opens the way for grain, feed and seed dealers to promote their own interests thru helping their farmer patrons.

Every grain elevator operator should be intensely interested in promoting the use of pure seeds of standard varieties. The grain dealer who is able to help his patrons to increased yields and top prices will win their everlasting gratitude and continued patronage. Not only does he classify himself as a helpful influence in his community, but he has an opportunity to reap material reward thru handling the increased volume that becomes available thru the planting of better seed, and thru sale of sidelines to farmers who are able to increase their purchases.

A beneficial annual practice among many elevator operators in the Corn Belt is that of setting up seed corn germinating equipment, where they make free germination tests on the seed corn of farmers in their communities. This helpful service actually costs little more than an effort. A few lard cans, some cheese cloth and old newspapers will make effective seed corn germination tests by the rag doll method at little expense other than time. A series of shallow sand boxes can be similarly used. Or if the grain dealer wants to be impressive about it he can buy small effective commercial germinators that minimize the labor involved, and control heat and humidity for the seeds being tested.

An indirect benefit from setting up seed testing apparatus is that the results of the tests give the grain dealer opportunity to demonstrate and convincingly promote the use of pure seed; and give him the names of farmers who plant top quality seeds and may be expected to grow the best crops.

At Dairen, stocks of soybeans at the end of January were 273,000 tons compared with 210,000 tons at the end of December and were practically double the stocks at the end of January a year ago. The total quantity of Manchurian beans available on Feb. 1 for export during the remainder of the current marketing year February-September, 1937, as beans, bean oil, and bean cake was estimated at 2,450,000 tons, compared with 1,980,000 tons a year earlier.

LIFE MADE SWEET

Life is made sweet because of friends we have made.

And the things which in common we share.

We want to live on, not because of ourselves,

But because of the people who care.

It's in giving and doing for somebody else;

On that all life's splendor depends,

And the joys of this life, when you've summed it all up,

Are found in the making of friends.

Recovery for Stolen Wheat

Without knowing it was stolen the manager of the Farmers Union Elevator Co. bought and paid for 684.9 bushels of stolen wheat delivered by one Moe, late in December, 1932, and early in January, 1933.

The owner of the stolen grain was given a statement, on request of attorney, of the amount delivered by Moe, on May 14, 1934. On Sept. 5, 1934, the owner, John Hovland, demanded restitution or payment of the market price as of Sept. 5.

Suit was brought on refusal, in the district court of Traill County, but the court decided in favor of defendant elevator company that plaintiff was entitled only to the value at date of conversion which was only 30 cents per bushel, instead of \$1.03 at time demand was made.

In affirming the judgment for the amount the Supreme Court of North Dakota on Nov. 13, 1936, said: "An innocent person can obtain no title to personal property from a thief. A person who purchases property from the possessor thereof without ascertaining whether he has title thereto, makes the purchase at his peril and may be sued in conversion by the true owner."—269 N. W. Rep. 842.

Ticket Must Be Surrendered by Holder Demanding Delivery

D. C. Dilley delivered 5,000 bus. of wheat to the elevator of J. H. Gruver & Son, of Gruver, Tex., and on Sept. 12, 1932, received a warehouse receipt for the grain.

In 1933 the Gruvers paid him \$2,000, leaving a balance of \$624 due, at the market price. Thereafter the price declined until \$2,000 was more than the value of the wheat.

This wheat and that of others was stored by the Gruvers in a terminal elevator at Amarillo. Money was borrowed on this wheat and advanced to farmers who had wheat stored. About November, 1932, the market declined to 18 cents per bushel and the entire mass of wheat was taken by creditors to repay the money so advanced.

On the theory that the Gruvers had placed it out of their power to redeliver him his wheat Dilley brought suit for alleged willful conversion, and the highest intermediate value of the wheat to date of the trial.

The evidence developed, however, that the Gruvers could have redelivered the wheat at any time.

The defense was that Dilley never tendered the warehouse receipt and under the Texas warehouse law J. H. and L. H. Gruver, licensed public warehousemen, had to comply with the law that "No public warehouseman shall under any circumstances, or upon any order or guaranty whatever, deliver the property until the receipt had been surrendered."

Dilley had hypothecated the receipt at a bank as collateral, and the bank held the receipt as late as June, 1933.

Dilley waited until February, 1935, and then demanded \$1 per bushel, and his suit was for the highest intermediate value only.

The court held Dilley was entitled to something for the wheat but could not give him judgment for less than the highest intermediate value, as that was his demand. Not being entitled to the highest intermediate value, as there was no default on demand of wheat, the court could award him nothing. The Court of Civil Appeals of Texas on Oct. 5, 1936, affirmed the judgment in favor of defendants J. H. and L. H. Gruver.

The court quoted with approval a decision of the Supreme Court of South Dakota that even if the warehouseman had swept his bins clean there was no inability to deliver and consequent conversion, if within 48 hours he could procure elsewhere and deliver the kind and grade of wheat deposited.

Asked—Answered

[Readers who fail to find trade information desired should send query for free publication here. The experience of your brother dealers is worth consulting. Replies to queries are solicited.]

What Has Happened to Protein Premiums

Grain & Feed Journals: Do tell what has happened to the attractive premiums millers were accustomed to pay for high protein wheat?

On March 22 No. 2 Dark Hard Wheat sold in Chicago at 1.45¾ or 5 cents over May and the same grade sold in Kansas City at 1.39¾ to 1.40½, while No. 3 dark hard sold at 1.35¾ to 1.37½. On the same day No. 1 hard sold in Chicago at 1.47 to 1.47¾ or 7 cents over May.

How must the country shipper market his high protein wheat to get its merited premium?—F.R.M.

of the suction type elevators are in use, mostly afloat, to suit the convenience of the large steamships, which thus can discharge general cargo at a dock while the grain is going to a lighter on the other side of the ship.

A small pneumatic unloading equipment to discharge Mississippi River barges was installed at the New Orleans public elevator; and the largest pneumatic unloading system in the United States is at the state owned elevator at Albany, N. Y.

Baltimore, Md.—The Kelco Mfg. Co. has moved its plant and offices to 4020 E. Baltimore St.

Kansas Inspection Department Gets New Head

A. J. Plummer, Newton, Kan., has been appointed chief of the Kansas Grain Inspection Department by Gov. Huxman, to succeed T. B. Armstrong, a Landon appointee, who has headed the department since 1932, and had served as assistant supervisor from 1919 to 1932, except for the two years, 1924-25, an office that was abolished on his succession to "chief." A bill now before the Kansas legislature considers re-establishing the office of assistant supervisor.

Mr. Plummer, former Kansas Wesleyan University student, began grain inspection service as a sampler at Salina, and became assistant to the Salina inspector. For a time he was associated with Faith Grain Co. at Salina in the cash grain business, also handling country elevators. For the last six years he has been inspector, and superintendent of milling wheat mixing operations at the Goerz Flour Mills, Newton.

Vacuum Unloading of Grain?

Grain & Feed Journals: I would like to have information in regard to unloading of grain by the vacuum system, its advantages and disadvantages, compared with the dump system.—Carl Wiedlocher, Springfield, Ill.

Ans.: The cost of elevating grain by the pneumatic suction system is so much greater than by the belt and bucket system that it finds favor only where it is difficult to use the ordinary leg. The greater cost is the result of the vastly greater amount of power required by the pneumatic system.

Abroad at Hamburg and Antwerp very many

Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same industry. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Apr. 13, 14. Western Grain & Feed Dealers Ass'n, Annual Meeting, Hotel Roosevelt, Cedar Rapids, Ia.

Apr. 22, 23, 24. California Hay, Grain & Feed Dealers Ass'n, San Francisco, Cal., headquarters the Palace Hotel.

May 10, 11. Illinois Grain Dealers Ass'n, Decatur Ill.

May 14. Oregon Feed Dealers Ass'n, Portland, Ore.

May 26, 27. The Millers National Federation, Drake Hotel, Chicago.

June 1, 2. Pacific States Seedsmen's Ass'n, Santa Barbara, Cal.

June 2-3. Northwest Retail Feed Ass'n, Hotel Nicollet, Minneapolis, Minn.

June 7, 8. Central Retail Feed Ass'n, Schroeder hotel, Milwaukee, Wis.

June 10, 11. American Feed Manufacturers Ass'n, Homestead Hotel, Hot Springs, Va.

June 10, 11, 12. Southern Seedsmen's Ass'n, Nashville, Tenn.

June 14. Farm Seed Group, Statler Hotel, Cleveland, O.

June 14 to 16. Society of Grain Elevator Superintendents of North America, Fort William-Port Arthur, Ont.

June 14 to 17. American Seed Trade Ass'n, Statler Hotel, Cleveland, O.

June 21, 22. Ohio Grain, Mill & Feed Dealers Ass'n, Breakers Hotel, Cedar Point, Sandusky, O.

Sept. 9, 10. Mutual Millers & Feed Dealers Ass'n, Jamestown, N. Y.

October 11, 12. Grain & Feed Dealers National Ass'n, Dallas, Tex.

Grade Changes Effective Oct. 1 and July 1

The suggested amendments to the rules for grading wheat, barley and oats, with modifications desired by the trade as stated in recent conferences, were promulgated Mar. 17 by the U. S. Dept. of Agriculture, to be effective on barley and oats July 1 and on wheat Oct. 1, 1937.

This early promulgation is made by Dr. Parker, head of the Grain Division, under pressure from the grain trade, to avoid trading in old and new style and to get the earliest benefits of the changes.

What will be done about the perforations in the corn sieve remains to be seen.

Following is the official order in full:

Cereal Oats

Effective on the first day of July, 1937, strike out the word "cereal" wherever it appears in the section entitled "Cereal Oats" and insert in lieu thereof the word "Thin."

Barley Dockage

Effective on the first day of July, 1937, strike out the entire section entitled "Dockage" and insert in lieu thereof the following:

"Dockage includes weed seeds, weed stems, chaff, straw, grain other than barley, sand, dirt, and any material other than barley, which can be removed readily from the barley by the use of a metal scalper riddle sieve with slotted perforation 9/64 inch wide by ¾ inch long, and by the use of a 20-gage metal sieve with equilateral triangular perforations the inscribed circles of which are 5/64 inch in diameter; also undeveloped, shriveled, and small pieces of barley kernels removed in properly separating the foreign material, and which cannot be recovered by properly rescreening or recleaning with the sieve having equilateral triangular perforations the inscribed circles of which are 5/64 inch in diameter."

The quantity of dockage shall be calculated in terms of percentage based on the total weight of the grain including the dockage. The percentage of dockage, so calculated, when equal to 1 per cent or more, shall be stated in terms of whole per cent, and when less than 1 per cent shall not be stated. A fraction of a per cent shall be disregarded. The word "Dockage," together with the percentage thereof, shall be added to the grade designation.

In the section entitled "Definitions" strike out the paragraph "Basis of Grade Determinations" and insert in lieu thereof the following:

Basis of Grade Determination.—Each determination of dockage, temperature, odor, garlic, and live weevils or other insects injurious to stored grain shall be upon the basis of the grain as a whole. Each determination of heat-damaged kernels and of mellow barley kernels shall be upon the basis of the pearled dockage-free grain. All other determinations shall be upon the basis of the grain when free from dockage.

Immediately following the paragraph entitled "Sound Barley," insert a new paragraph to read as follows:

"Damaged Barley.—Damaged barley shall be kernels and pieces of kernels of barley which are damaged or materially discolored by blight or mold, or which are heat damaged, sprouted, frosted, badly ground damaged, badly weather damaged, or otherwise materially damaged."

Shrunken and Broken Wheat Kernels

Effective on the first day of October, 1937, in the table of grade requirements for class I, hard red spring wheat, strike out the footnote reference *a* at grade No. 4 and the footnote *a*.

In the table of grade requirements for class I, hard red spring wheat, add a footnote reference ² at grades No. 1 heavy, No. 1, and No. 2 and add the following footnote to the table:

"The wheat in grades No. 1 heavy and No. 1 of this class may contain not more than 7 per cent, and the wheat in grade No. 2 of this class may contain not more than 10 per cent, of shrunken and/or broken kernels of grain and other matter that will pass through a 20-gage metal sieve with slotted perforations 0.064 inch wide by ¾ inch long."

In the table of grade requirements for class II, durum wheat and class III, red durum wheat, strike out the footnote reference *a* at grade No. 1 and the footnote *a*.

In the table of grade requirements for class II, durum wheat and class III, red durum wheat, add a footnote reference ³ at grades No. 1, No. 2, and No. 3 and add the following footnote to the table:

"The wheat in grades No. 1 and No. 2 of each of these classes may contain not more than either (a) 7 per cent of shrunken and/or broken kernels of grain and other matter that will pass thru a 20-gage metal sieve with slotted perforations 0.064 inch wide by ¾ inch long, or (b) 10 per cent of all such material that will pass thru said sieve together with the broken kernels of grain of any size which remain on said sieve; and the wheat in grade No. 3 of each of these classes may contain not more than either (a) 10 per cent of shrunken and/or broken kernels of grain and other matter that will pass thru said sieve, or (b) 15 per cent of all such material that will pass thru said sieve together with the broken kernels of grain of any size which remain on said sieve."

In each of the tables of grade requirements for class IV, hard red winter wheat; class V, soft red winter wheat; and class VI, white wheat; strike out the footnote reference *a* at grade No. 4 and the footnote *a*.

In each of the tables of grade requirements for class IV, hard red winter wheat; class V, soft red winter wheat; and class VI, white wheat; add a footnote reference ¹ at grades No. 1, No. 2, and No. 3 and add the following footnote to each of the tables:

"The wheat in grades No. 1 and No. 2 of this class may contain not more than 7 per cent, and the wheat in grade No. 3 of this class may contain not more than 10 per cent, of shrunken and/or broken kernels of grain and other matter that will pass thru a 20-gage metal sieve with slotted perforations 0.064 inch wide by ¾ inch long."

The World Ponders the Wheat Puzzle

From address delivered at the North Dakota Farmers Elevator Convention
By R. I. MANSFIELD of Chicago, Ill.

For years the eyes of the world have been turned upon wheat. Not only because it is the staff of life but because there is a well defined anxiety in many quarters as to the extent of the current world's supply.

This fretfulness has been intensified by the European situation, where nations are living in dread and expectancy of another gigantic war where a single spark might cause a conflagration of terrifying immensity, and wheat provides the sinews of war. For a period of years this country of ours and the world in general suffered from overproduction, a situation aggravated by price pegging, subsidies and other unwise and uneconomic political measures. To overcome this condition, which at the depth of the depression saw wheat selling in the Chicago market at little over 40c a bushel, a plan of acreage reduction in our country was made effective. There was no political way to anticipate subsequent drouth and as a consequence we have seen our country grow crops inadequate for our domestic needs and become an importer.

Wheat continues to be the whimsical will-o-the-wisp, the siren of commodities. Strange and elusive, ever going contrary to expectations, a pawn of insects, floods and withering suns. It is because of this and the peculiar world's situation prevailing that we have chosen to talk to you today on the subject.

Let us therefore take the separate pieces of the puzzle, fit them together as best we may and see what appears to be the solution to us.

We will review first the international wheat outlook and will avoid as much as possible a maze of figures which after all only confuse and mean little except to economists, accountants or college professors.

The total world's wheat supplies are officially estimated this year to be some 77 million bushels below those of the preceding crop year. World production, exclusive of Russia and China, is officially placed at 3,481 million bushels, against 3,558 million bushels last year and a five year average of 3,722 million bushels. These figures are from our own Department of Agriculture Bureau of Economics and you can rest assured that they lean to large totals rather than moderate ones because the administration is thumbs down on high prices or inflation, with its inevitable advancing commodity prices, making certain an increase in the cost of living to all.

Known foreign consumptive requirements abroad are such that the world's probable excess of supplies over needs is placed at such pitifully small totals that with current needs, crop carryover, working stocks and world distribution on the latter alone it virtually means an actual shortage in some parts of the world the present crop year.

Dictatorships Cursed by Famines.—Strange it is, but true, that there is a serious domestic shortage of wheat in every country in the world boasting a dictator or even a near dictator. Despite the most intensive and scientific planned economy, and every scheme known to man to increase wheat production in various European countries, they are all under the same curse. Strange, isn't it? Is it just a coincidence?

We find Italy importing vast quantities of wheat supplies and buying feverishly into the future after early predictions that she was rapidly approaching self-sufficiency.

Germany bluffed the world up to the last moment and then had to admit a serious food shortage and is now watching her citizens' garbage cans, to see that they do not throw away or waste any precious food. Even dogs

in Germany are having a hard time and are forbidden bones, because they must go in the soup and not to the dogs.

France is moving Heaven and Earth to get a flow of wheat started in her direction and is making no headway, while the Old Lady of Threadneedle Street, England, is quietly acquiring food supplies and planning to build up and put aside a year's supplies of essentials. This against all future eventualities.

The Great Bear of the North (Russia) sends out reams of figures on her production, but her gaunt bony frame and protruding ribs belie the figures and loudly proclaim that hunger haunts many parts of that unfortunate land. It tells us that something is seriously wrong with the bear's insides. Looming back of all this economic disturbance and unrest are the black clouds of war and impending conflict in every part of Europe. Even now the small boys have been shooting off some cannon firecrackers in Spain's back yard that have made all the surrounding nations jittery. They are sitting up nights trying to find a way to stop these boys without getting into a row with their dads.

Many are saying that war will not come and the clouds will blow over. These are optimists where the wish is father of the thought. Leading statesmen in all these countries are working feverishly day and night to prevent a fire breaking out that will entirely change the map of Europe. Their anxious faces tell us that they fear the worst. One of the most conservative said publicly in the past few days that war would come in 5 days, 5 weeks or 5 months, but come it would. Armament and preparation for war goes on apace and vast bodies of men are being taken out of productive lines into armed camps where they become potential consumers on a vast scale and double their nation's food requirements.

The present world's wheat situation has disclosed the futility of man's attempts to control acreage, production or consumption. It has completely bared the inability of nations to live within themselves. Wherever it has been attempted it has proven a total failure and has brought ruin and chaos. We now see the leaders in scientific planning and control of wheat and foodstuffs abandoning their plans and going back to old fashioned natural barter between themselves and other nations. They are pulling down useless tariff walls miles high that were only barriers to world trade after finding out in actual experience their futility.

Wheat production overshot the mark in the period from 1925 to 1930. Then something happened. A new force appeared. Down at the University of Chicago they call it nature, we who have to do with crops and yields and weather call it God. Rains failed in territory hitherto never before so afflicted. Iowa, Illinois and Indiana had proudly boasted that never in their history had they had a crop failure. They had to haul down that flag as protracted drouth and fiery heat swept over the Mississippi River from the burning plains of the southwest and scorched their lands as thoroughly as it did the prairies of Kansas and Nebraska.

This situation did not confine itself to the United States but prevailed in similar intensity in Canada, Australia and Argentina. World's surpluses melted in this withering visitation, like snow in early spring sun. How quickly the God of the harvest brought finite man to his knees and made him acknowledge that as the good book says—Paul may plant, Apollos may water but God giveth the increase.

This is the more remarkable when one realizes the frantic human efforts in Europe to increase production scientifically and the loud claims made of the near approach of complete self sufficiency, by all the importing nations of the earth. We are getting the parts of the puzzle together fast. It first spells so close an adjustment that wheat shortage appears inevitable somewhere in the world the present crop year. Next it shows that man made schemes to increase production do not meet with the favor of either nature or nature's God. It tells us plainly that we may be in a new era but 2 and 2 still adds up four, and that the old rules that have been tried and true over the years are the safest and surest in the long run. That we had better not be monkeying with the buzz saw of Nature.

You will naturally ask "what of the present crop year of 1937, at home and abroad." I say with full knowledge of being accused of occupying the position of a prophet, which I am not, that the prospect of a large wheat crop in 1937 is decidedly remote. I must give you valid reasons for this view and they are found in the moisture and soils condition in all the surplus producing nations of the world. I refer particularly to Canada, Australia, the United States and Argentina. Even the Danubian countries are so disturbed by political developments that they too are affected. Argentina has a possibility but she secured a fair crop this year only by the skin of her teeth. Drouth and heat took heavy toll.

Worse than that we have a world's wheat picture with a great big question mark behind and back of it. That question mark is "WAR or PEACE—WHICH?"

Now let us turn to the United States and try impartially to view our present outlook. Incidentally we are forced to include Canada in such an examination because they are geographically joined to our picture and cannot be cut asunder.

The great North American dust bowl produced more than 150,000,000 bushels of wheat on 65,000,000 acres in this area in 1936. This great acreage is what determines the size of the North American wheat crop. Its condition as I speak today is distinctly perilous and only the spring season will reveal the answer.

This entire district with few exceptions went into the winter with a lack of sub-soil moisture and has not had precipitation during the winter to materially change the picture. Your own state must depend on the early spring rains to determine what she will have in the way of a wheat crop.

Grasshopper Bait

Lee A. Strong, chief of the Bureau of Entomology and Plant Quarantine in the federal department of agriculture, predicts serious grasshopper infestations will occur in Illinois, Missouri, Iowa, Nebraska, Kansas, North Dakota, Montana, Wyoming and Colorado in 1937, and that less serious outbreaks will appear in Michigan, Wisconsin, South Dakota, and Oklahoma.

The need for poison bran bait, estimates Mr. Strong, will total 81,252 tons, as follows: Arizona, 212 tons; Arkansas, 356; California, 281; Colorado, 3,191; Idaho, 61; Illinois, 8,398; Iowa, 16,086; Kansas, 4,700; Minnesota, 520; Michigan, 1,216; Missouri, 3,863; Montana, 7,758; Nebraska, 11,183; Nevada, 50; New Mexico, 50; North Dakota, 13,812; Oregon, 50; Oklahoma, 1,301; South Dakota, 3,837; Utah, 413; Wisconsin, 1,641; Wyoming, 2,273. Only 26,997 tons of poison bait were used in 1936.

Director W. B. Banning of the Nebraska department of agriculture on Feb. 1 said officials of 15 states have assured him they will support efforts to obtain federal funds to fight grasshoppers and other pests in 1937. Banning said congressional delegations from these states have endorsed the drive for a five million dollar appropriation for pest control.

Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reforms or improvements. When you have anything to say of interest to members of the grain trade, send it to the Journals for publication.]

Unite Against Itinerant Trucker

Grain & Feed Journals: Generally speaking, the legislators are beginning to realize that the small town is being wiped out by the unsound practices of the irresponsible trucker. Let's urge other businesses to contact the legislators.

The lumber industry, the hay men, the fruit and vegetable associations and the seed men, all these various industries are doing their part and with all this help we certainly should be able to have this legislation enacted.—A. H. Meinershagen, Higginsville, Mo.

Natural Oats Should Not Be Graded "Cereal"

Grain & Feed Journals: I have had the opportunity to read the recommendations submitted by the com'ites from the several markets where hearings on grade changes were held. It is apparent to me that the grain trade's recommendations for the most part were based on the lesser of two evils; either to retain the present percentage of cereal oats now permitted in the grades or to increase it whereby the natural oats would not come within the cereal class.

The purpose of making a separate class for cereal oats was to overcome the influence they were having both on the cash and futures. Until 1933 the classing of cereal oats was on the basis of general appearance and only oats that had been processed were so classed. The grain trade argued at the time the cereal grade was promulgated that the grades did not differentiate between cereal and natural oats and the permitting of cereal oats to be delivered on future contracts was depressing the futures and likewise affecting the cash prices.

It has been stated, from a reliable source, that there is about 70 million bushels of oats processed, which represents 4.37 per cent of a normal crop. Cereal oats produced are about 1.44 per cent of a normal crop. The fact that before the establishment of a separate classification for cereal oats that this small amount affected both futures and cash, then it is a reasonable conclusion that the permitting of 20 per cent of cereal oats to be delivered on future contracts would have a greater effect. Thus it will be seen that we have legalized the mixing of cereal oats to be delivered on future contracts up to 20 per cent and officially advertise to the grain trade and so-called public, that if they take deliveries they may have delivered to them a maximum per cent of cereal oats permitted in the grades, which percentage is around 18 per cent in excess of the actual cereal oats produced by the processor.

From July 1st to December 1st, 1936, there was 3.91 per cent of the receipts in Chicago grading cereal oats. On the out-shipments for this same period there was 14.4 per cent graded cereal. It would appear to me that to resort to the method of determining cereal oats prior to 1933 before the adoption of the mechanical separation with a definite limit, would prove more beneficial for the marketing of our oats and prevent the classification of oats on the same basis as cereals, which we are doing today.—W. H. McDonald, Chicago, Ill.

Charges for feed, bedding and yardage at the Denver Union Stockyards have been ordered reduced about \$50,000 a year by Sec'y of Agriculture Wallace, effective Mar. 19.

From Abroad

Belfast, Eng.—A new grain elevator is to be erected on the quay of the Pollock Dock, newest dock in the Belfast harbor, named after the Right Hon. H. M. Pollock. Dimensions will be 275 ft. long, 100 ft. wide.

India's second official estimate of 1937 flaxseed acreage is reported at 2,879,000 acres, compared with the revised second estimate for 1936 of 2,636,000 and the final figure of 3,402,000 acres.—Director of Statistics, Calcutta.

To stimulate 1937 grain production the Moscow government on Mar. 21 announced four decrees aiding farmers. All arrears in 1936 grain production are canceled. Instead of arbitrary fine for failure to make grain deliveries all such cases are to be heard in court. The payment in kind for use of tractors has been reduced.

Berlin, Germany—The Reich has been purchasing Argentine wheat. Spokesmen for the German grain purchasing bureau refuse to disclose the volume of purchases or whether the purchasing will be continued. (Reports in Chicago on Mar. 10 credited Germany with purchase of 2,000,000 bus. of Argentine wheat the previous day.)

Czechoslovakia, normally a net importer of wheat, became a net exporter in 1936. Wheat production has been heavily increased in the last few years due to high prices paid to producers by the Grain Monopoly, causing an accumulation of burdensome stocks that the Monopoly was quick to drop when world wheat prices approached its guaranties. Czechoslovakian exports, starting rather late in 1936, totaled over 1,200,000 bus., compared with less than 6,000 bus. in 1935.

Buenos Aires, Argentina—Wheat exports, pouring out of the country at more than double the normal volume, totalling 80,014,000 bus. between Jan. 1 and Mar. 20, compared with 11,412,000 in the same period a year ago, and 45,100,000 in the same period a year ago and 45,100,000 in the same period of 1935, have caused the National Grain Board to threaten an embargo on exports to protect the home market from shortage. A new statistical bureau has been set up to keep in contact with the market daily in preparation for forcible curtailment of wheat exports should this prove advisable.

Estimated shipments of 8,083,000 bus. from Argentina this week emphasize still more the rapid disappearance of the Argentine surplus, and give color to predictions that Argentina may impose restrictions on exports later on. This would not be unnatural in view of the needs of various important customers who have not yet covered their requirements owing largely to the unexpectedly heavy takings by Italy and Germany. Great Britain, Belgium and other buyers presumably are now in a position where their needs will be heavy and where they will have to pay high prices for their supplies.—Hulburt, Warren & Chandler.

Utilization of Wheat, Corn and Oats

From address by R. O. CROMWELL, Chicago, under auspices Ass'n of Grain Commission Merchants.

We were accustomed to export a fair portion of our wheat supplies each year previous to the depression, but our near-sighted planned economic scarcity, our drouth, and the policy of extreme economic nationalism in leading foreign consuming countries, destroyed this trade.

Annual per capita retention of wheat as flour declined from 5.23 bus. in 1904 to 1908, to 4.15 bus. in 1922 to 1925, and in 1933 to 1936 will show about 3.57 bus., a decline in the latter from the former of almost 32 per cent.

Seed: The average annual use of wheat for seed in the last ten years is officially estimated at 82,000,000 bus., or 1.21 bus. per acre sown. Official estimates for 13 years show a drop each year of about one-tenth of a bushel from the previous year, presumably to allow for reduced per-acre needs as the center of acreage shifts westward. At present the estimated requirement is 1.19 bushels per acre. Largest total bushels of wheat used for seed in the above period was 90,000,000 in 1927-28 and the smallest 75,500,000 in 1933-34.

Farm Feeding.—Average consumption of wheat fed on farms where produced from 1924 to 1928 is estimated officially at 43,000,000 bushels. Quantities fed on non-producing farms and in towns are thought to equal about one-half of that fed where produced, as was the case in 1928 and 1929. In years of heavy feeding on producers' farms such as in the crop years of cheap wheat beginning 1930, 1931 and 1932 in which they fed 157,000,000, 175,000,000 and 125,000,000 bus., respectively, the bushels fed elsewhere, including wheat in mixed feeds, are reported to have ranged from 20 to 25 per cent of these quantities. In 1933-34, 1934-35 and 1935-36, official estimates of wheat fed where produced were 72,000,000, 84,000,000 and 98,000,000 bus., respectively. Large feeding in 1934-35 was due to short feed crops, and in 1935-36 to poor quality from rust.

Other Wheat Uses.—The summarized average utilization and disappearance table herein gives the difference between estimated supply and itemized uses as an unaccounted residue. This residue must include special edible flour, breakfast foods, mixed feeds and other wheat fed on non-producing farms, other industrial uses, loss and errors in estimates. Except when errors offset these other uses the figures unquestionably can be considered too small and may indicate an under-estimation of supplies rather than an over-estimate of accountable disappearance.

Durum wheat ground into semolina and flour has ranged from just under 9,000,000 bus. in 1924-25 to over 14,000,000 bus. in 1929-30, and has held steady at about 13,000,000 bus. since that time, except for the estimated nearly 16,000,000 in 1935-36. Quantities of durum used for feed since 1924 have ranged from over 8,000,000 bus. in 1928 down to 2,500,000 in 1934. Feed consumption, the other important item of use is at hand for only the last three years, and ranged from some 2,500,000 to 9,500,000 bus. During these three years the total disappearance for food, feed and seed has been 25,000,000, 18,000,000 and 26,000,000 bus.

UTILIZATION OF CORN.—Seasonal marketing of corn by farmers has changed

WHEAT SUPPLY, UTILIZATION AND DISAPPEARANCE

Years beginning	Crop plus previous carryover	Milled, less flour exported	U.S.D.A. flour consumed	Seed	Fed on producing farms	Unaccounted	Total	Net exports	Carryover at year's end
1924-28.....	840	492	503	83	45	11	629	180	131
1929-34.....	1057	463	505	81	120	29	693	76	296
1935.....	772	460	?	90	98	16	664	29 ²	137

¹Carryover positions changed somewhat from

that of previous years.

²Net imports.

somewhat since the advent of all-weather roads. From 1916 to 1920, the Department of Agriculture estimated that heaviest marketing averaged from November to February at 46.9 per cent of the year's total, next heaviest from March to June at 30.5 per cent and least from July to October at 22.6 per cent. But from 1929 to 1933 this authority estimates an average of 39.8, 27.3 and 32.9 per cents of the year's totals, respectively, for the same periods.

In fiscal years ending June 30, 1925-29, 1934 and 1935, it required 12, 25.0 and 34.0 million bus. of corn to make the grits used for beer, but over 80 per cent of the corn used was turned out as a by-product corn flour and hominy feed.

Six-year average (1924-1929) corn uses in per cent of the supply are as follows: merchant and custom mills, mixed feeds and breakfast foods, 4.5; wet-process grind, 3.1; distilled spirits, 0.3; seed, 0.7; farm poultry, 5.3; farm hogs, 42.2; farm cattle, 21.3; farm horses and mules, 14.1; urban animals and poultry, 2.4; farm food not included in dry milling, 0.5; exports, 0.8; all other uses, 4.8. These percentages are not in exact agreement with old official estimates for the same period due largely to our use of recent crop and carryover revisions.

A small or large crop in the corn belt, in a given sized total crop, has more of an effect on supplies reaching terminal markets, and hence on price and consumption than a small or large crop outside the belt. Quality is a factor in consumption because of intrinsic value and cost of conditioning. Merchantable quality or salable portion of the crop averages about 84.5 per cent.

Receipts of corn at 13 primary markets from November 1 to October 31 in the ten years 1924-25 to 1933-34 averaged 234,000,000 bus. and ranged from 149,000,000 in 1931-32 to 307,000,000 in 1927-28. Receipts were 98,000,000 bus. in 1934-35 and 192,000,000 in 1935-36.

OATS UTILIZATION.—Of the 1928-32 average production of oats of 1,215,102,000 bus., about 120,000,000 bus., or ten per cent of the crop was required to seed the average 40,015,000 acres. The amount of oats bought by millers ranges from 35,000,000 to 45,000,000 bus. of which about one-third is resold for feed as small cereal oats and by-product feed. The remaining 87 to 88 per cent of the crop is used for feed.

Primary receipts of oats in calendar years have averaged 150,000,000 bus. in the ten years to 1933 and ranged from 263,000,000 in 1924 to 80,000,000 in 1931. In 1934 they were 49,000,000, in 1935, 89,000,000 and in 1936, 82,000,000 bus. In the case of corn and oats it appears that utilization, one year with another, changes greatly since such a large percentage of the supply is consumed as feed, and feed substitutions are made easily.

CORN SUPPLY, DISTRIBUTION AND DISAPPEARANCE (Million Bushels)

	1915	1924-29	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Farm stocks ¹	96.0	125.4	192.3	86.3	145.3	131.5	162.7	250.8	325.1	274.8	63.0	174.5
Commer. visible ²	4.3	10.5	21.8	2.0	3.6	4.6	7.3	28.0	62.7	58.5	2.5	3.8
New crop.....	2994.8	2561.9	2616.1	2665.5	2521.0	2080.4	2573.3	2926.9	2396.5	1478.0	2296.7	1524.3
Imports ³	2.1	1.6	0.6	0.4	1.5	0.7	0.3	0.2	3.0	43.2	24.5	....
Total supply.....	3097.2	2699.4	2830.8	2754.2	2671.4	2217.2	2743.6	3205.9	2787.3	1854.5	2386.7	....
Exports ⁴	54.5	21.0	21.0	42.3	8.6	3.6	7.2	8.6	5.1	2.3	3.5	....
Domestic supply.....	3042.7	2678.4	2809.8	2711.9	2662.8	2213.6	2736.4	3197.3	2782.2	1852.2	2383.2	....
Supply year end ⁵	90.2	126.6	88.3	148.9	136.1	170.0	278.8	387.8	333.2	85.5	178.3	....
Disappearance in U. S.:	2952.5	2551.8	2721.5	2563.0	2526.7	2043.6	2457.6	2809.5	2449.0	1787.7	2204.9	....
Dry milling and mixed feeds ¹	166.8	115.7	118.1	120.0	123.7	114.0	104.4	....	....	....	....	....
Wet-process grind ⁶	62.1	79.8	87.2	88.2	77.5	66.6	62.0	71.8	69.9	56.0	66.0	....
Distilled spirits ⁶	32.1	8.3	6.2	9.8	10.0	2.5	4.8	5.8	10.4	18.2	29.3	....
Seed.....	17.9	17.0	17.0	16.6	17.3	18.4	19.0	18.4	16.9	16.6	17.0	....
Farm feed, loss, etc. ⁷	2673.6	2331.0	2493.0	2328.4	2298.2	1842.1	2267.4	....	....	....	....	....
Animal units, per cent ⁸.....	....	100.0	97.9	98.0	95.3	94.9	99.7	103.9	102.2	81.1	84.1	83.3

¹Nov. 1 thru 1926. Beginning 1927 on October 1. ²November 1. ³Nov. 1 to October 31. ⁴Following calendar year. Merchant and custom mills. Estimated by Bureau Agricultural Economics prior to 1919. Merchant and custom mills, U. S. Census, conversion from amount of product manufactured to bushels required by Bureau Agricultural Economics for 1925 and by us thereafter. Census available only odd years. Even years interpolated. ⁵Nov. 1 to Oct. 31. Starch, sugar and syrup. ⁶Fiscal years beginning June 30. ⁷Includes urban feed. Large amounts of mixed feed also farm fed. Includes minor industrial uses. ⁸Partly estimated. ⁹Hogs, cattle, horses and mules on farms Jan. 1, weighted according to feed consumption by each as estimated by the Bureau of Agricultural Economics. Figures in per cent of 1924-1929 average.

Washington News

The Guffey-Vinson bill to regulate the coal industry has been passed by the House. Price fixing is permitted.

A sub-com'mite to consider food and drug legislation has been named by the House Interstate Commerce Com'mite.

The Jones Bill to re-enact the marketing agreement provisions of the A. A. Act has been approved by the House Agriculture com'mite.

Senator Pope, sponsor of the crop insurance bill, says: "We must admit there is grave doubt whether the Supreme Court will hold this program constitutional."

Administration leaders' budget estimates call for \$125,000,000 for the first year of tenant aid, and \$100,000,000 to start "all-risk" crop insurance on wheat. Social Security for the poor man in the moon will cost \$13,000,000,000.

The Interstate Commerce Com'mite of the Senate has favorably reported the bill to broaden powers of the Federal Trade Commission in regulating unfair trade practices. Such practices effect their own punishment. A swindled customer will not return for a second treatment.

Washington, D. C.—Favorably reported by the Senate interstate commerce com'mite have been organized labor's bills S. 532 and S. 29, the former giving to the Interstate Commerce Commission power to dictate conditions in train dispatching offices, the latter increasing the power of the commission to order installation of safety control systems on railroads.

The biggest appropriation recommended by the Department of Agriculture for 1937 is \$500,000,000 to continue benefit payments under the soil conservation act. This is \$60,000,000 more than the President suggested in his budget message. Owners of swamp land, timber land or other untitled acres will be glad to accept a bonus for not growing wheat.

Amendments Suggested to Robinson-Patman Act

A number of amendments to the Robinson-Patman Act are in Congress' legislative hopper. Endorsed by the National Industrial Council, division of the National Ass'n of Manufacturers, are amendments to:

Strike out or suspend for a number of years, the provisions in the Act permitting private suits for treble damages, until Commission rulings and court decisions can make the provisions of the Act clear.

Eliminate the criminal section of the Act during the period of interpretation.

Exempt from the provisions of the Act sales of machinery, equipment, etc., for use in manufacture, processing, or production of other goods, and sales of goods intended for further manufacture.

Clarify the words and phrases susceptible to two or more meanings, including "cost," "price," "due allowance," "proportionally equal," "like grade and quality," and others.

Acknowledge the legality of functional differentials, based on classification of customers, in addition to implied recognition in the "due allowance" provision.

Define and restrict the discretion of the Federal Trade Commission in imposing quantity limits.

Define the relationship of government purchases to the Act.

Chicago Conference on Grade Changes

The conference at Chicago called by the Grain Division of the Bureau of Agricultural Economics to acquaint the Department of Agriculture with the ideas of those concerned regarding the several proposed changes in the rules for grading grain was held with A. W. Kay, acting chairman of the Board's grain com'mite, presiding.

W. E. CULBERTSON, Delavan, Ill., sec'y Illinois Grain Dealers Ass'n: We feel there is enough cereal oats put into the grades at the present time. We would not look with favor upon any change in the grades that permitted more of the thin oats to be mixed in.

Oats that may be small naturally should be properly designated.

We would not object to a change in the name of the grade.

Cereal oats that have been sized out you can call anything you want to; but they should not come into competition with natural oats as grown on the farm.

We would like to see more of the cracked corn allowed in the corn by using the smaller screen. We are not referring to the meal. There may have to be two separations. The elevator man wants to get the most money he can for the grain to pay the farmer, which makes for the prosperity of the country.

MR. KAY read a report by a special com'mite of the Cash Grain Ass'n approving the Bureau's proposed addition of a definition for damaged barley.

ORRIN DOWSE read the position of the Cash Grain Ass'n on cereal oats that natural oats should not be stigmatized with the term "cereal;" and that changing the percentage of undersized oats permissible in the grade from 20 to 25 per cent would cause the whole price structure to suffer. The name "thin" is favored as being best descriptive of natural oats that screen out 20 per cent or more undersized.

LAWRENCE FARLOW, Bloomington Ill., sec'y Illinois Farmers Grain Dealers Ass'n: "We thought it unfair to mix cereal oats into natural oats. This matter was given consideration at the recent annual meeting of our Ass'n, where a resolution was adopted."

The resolution favored the 10/64 sieve for corn and opposed classification of country run oats as cereal oats.

MR. DOWSE read the Cash Grain Ass'n report on the corn sieve recommending the 10/64, and a 6/64 to take out the fine meal and assure keeping quality.

C. D. STURTEVANT, Chicago, for the Chicago Terminal Elevator Operators read an exchange of wires and letters between Chicago and Washington submitting that a matter which has been under investigation by the Department since some time prior to 1933 and which was based upon data extending back to 1923 is not premature; that sufficient time has been had by the Department to make the necessary determination and that their conclusions based upon such information as was available to them in 1933 were correct and that the change should be made (in the corn sieve).

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Belmont, Kan., Mar. 20.—Crop in good condition. There will be no wheat plowed up.—Moore Grain Co.

Blaine, Kan., Mar. 18.—Wheat acreage 115%, none plowed up; oats the same; rye 100% acreage, none plowed up.—X.

Alamota, Kan., Mar. 17.—It is surprising how the wheat has come out after our dust storms. Our moisture was wonderful.—Farmers Elevtr. Co., B. B. Hagerman, mgr.

Bellaire, Kan., Mar. 19.—Our wheat acreage locally 300% increase over past years. Crop condition is 100% at present. Good rain here last night.—Conn Grain Co.

Banner, Okla., Mar. 17.—Wheat acreage 100%, condition 80. Oats acreage 100%, just sown. Too early to know whether any will be abandoned or not.—Carl W. Vogel.

Altus, Okla., Mar. 18.—Ten per cent increase in wheat and looks 25% better than last year. Plenty of moisture for 30 days. Not quite so much oats at this time.—J. H. Bailey.

Butler, Okla., Mar. 17.—More wheat planted this year than last by about one-half. Crop is looking good. Have plenty of surface moisture but subsoil is very dry.—Paul Zobisch.

Buffalo, Okla., Mar. 17.—Ninety per cent wheat, condition 100%; not much other grain grown here. Best prospects we have had in 7 years. Not much will be plowed up.—Beeman & Litz, Jim Litz.

Silver Lake, Kan., Mar. 18.—Wheat acreage increased 20%; looks fine; 5% winter killed. Oats will be sown in abandoned acreage. Oat and corn acreage reduced 20% on account of soil conservation.—Merillat Bros.

Clay Center, Kan., Mar. 20.—Our wheat crop is 15% larger than last year and condition is 100. Don't think there will be any abandonment. Moisture condition is perfect. Most fields too wet for oats sowing.—J. W. Pinkerton.

Earleton, Kan., Mar. 19.—Wheat acreage 10% above average year, condition 85%. Oats half seeded, late for balance. Estimated acreage on flax 100%. Fall plowing below normal. Ground wet, will make row crop late.—George Brothers, by E. A. George.

Fellsburg, Kan., Mar. 19.—Wheat from Newton to Dodge City is in splendid condition. Plenty moisture in the ground. Hardly any wheat will be plowed up. Much better than last year. Edwards county has prospects of bumper crop.—J. M. Shannon.

Holyrood, Kan., Mar. 11.—We have all the earmarks of a good crop of wheat looking us in the face for which we are very thankful. The ground is in good condition and with a little moisture we can raise a big crop.—Holyrood Co-op. Grain & Supply Co., by Sherman Andrea, mgr.

Chicago, Ill.—Condition of winter wheat is estimated at 73.4% of normal compared with 75.8% in December and a 10-year (1928-33) average March condition of 80.8%. A March condition of 73.4% suggests a winter wheat crop of 621,000,000 bus.—R. O. Cromwell, statistician, Lamson Bros. & Co.

Stratford, Tex., Mar. 17.—About the same acreage of wheat sown as last year, and about 50% of this has been blown away or has died out. Favorable now for 35% of an average crop in this territory. Will be reseeded to barley, oats and milo this spring.—R. E. Roberts Grain Co., L. P. Hunter.

Augusta, Kan., Mar. 19.—Acreage of wheat, oats and barley will be about the same with us as last year. Not all oats or barley sown yet but will finish next week. Wheat has gone thru the winter in fine shape and surface and subsoil moisture are all that we could ask for. No wheat being plowed up, as it is good. Some winter barley not quite so good and perhaps about 10% of it will be plowed up. Think it will be replaced by corn and sorghum feeds. We really think that our wheat prospects are the best we have had here in the past five years.—Mannion Feed & Coal Co., J. J. Mannion.

Champaign, Ill.—The extension department of the University of Illinois estimates oat acreage in Illinois this year will be 4 million acres or about ½ million more than last year. Need for early pasturage and forage are the moving factors.

Rockport, Ind.—Much of the growing wheat that was under water during the disastrous Ohio River flood during January and February, has come out all right and some of the fields are looking much better than had been anticipated.—W. B. C.

Sublette, Kan., Mar. 19.—Wheat is about 60% better this year than last. What has blown out will be put in milo, cane, sudan. All early sown wheat is holding good, late sown wheat has blown pretty badly, but with any weather at all we can raise 60% of wheat crop.—Co-op. Grain Dealers Union, Roy S. Brown, mgr.

Attica, Kan., Mar. 19.—Small increase in wheat acreage here over 1936, condition fair, no subsoil moisture; 15% decrease in oats acreage. Just finishing seeding. Some up to a fair start, need more moisture. There will be a large decrease in corn acres this year, I would say 30%. Lad dust storm here today.—Earl B. Baker Grain Co.

Decatur, Ill., Mar. 20.—Generally wheat fields show more winter killing than anticipated, reducing stands to a point which will require considerable stooling to assure average yields. One-fifth of the fields examined now indicate probability of abandonment, varying according to localities and time of planting.—Baldwin Elevator Co.

Carter, Okla., Mar. 17.—We have the largest acreage of wheat this year we have had in eight or ten years, and I believe the wheat is looking better than it was a year ago. None of the wheat has been plowed up and I don't believe there will be. About the same amount of oats sown as last year.—Roger Mills Co. Co-op Ass'n, Roy Utley, mgr.

Cottonwood Falls, Kan., Mar. 20.—Wheat acreage increase 15-20% over 1936, wheat condition 80-85% of normal. Barley acreage increase 25% over 1936, barley condition 50% of normal. Oats acreage will be less than normal account fields too wet to sow. Corn acreage will be decreased 15-20% of normal. Top soil moisture good. Subsoil fair to poor.—Kansas Flour Mills Corp., P. E. Burnett, mgr.

Washington, D. C., Mar. 19.—Prospective acreage of all spring wheat for harvest in 1937 is 20,918,000 acres compared with 11,212,000 acres harvested in 1936 and the 5-year (1928-32) average harvested acreage of 20,414,000 acres. If abandonment of winter wheat should turn out about as was indicated in the Board's December 1936 report and if the prospective acreage of spring wheat is harvested, the total wheat acreage for harvest in the United States in 1937 would be between 67,000,000 and 68,000,000 acres. The total acreage harvested in 1936 was 48,820,000 and the 5-year (1928-32) average acreage was 60,138,000.—U. S. Dept. of Agriculture.

McAllaster, Kan., Mar. 20.—Wheat sown 10% increase, 5% blown out. There will be a good acreage of barley sown, but not much sown yet, as it has been too stormy for the last 10 days, and it is still storming. Not a big acreage of corn planted this year; not much oats sown here. Cane, kafir and milo make most of the spring crop. We are getting moisture now.—Gridley Elevator Co., John Newel, mgr.

Waverly, Kan., Mar. 19.—Wheat is coming on fine; looks best it has for several years; 30% more sown than usual. Oats, none sown yet on account of too wet; will be 20% more sown than usual. Had a big snow; it snowed all day the 13th; puts the ground in fine shape for moisture. Am sorry to say indications point just now to plenty of hail the coming summer, but I hope I may be mistaken. Corn will not be more than 40% of usual acreage planted, on account of the increase of wheat and oats.—John McClune.

Minneapolis, Minn., Mar. 20.—Soil conditions in the Northwest continue quite bad. There is sufficient top-soil moisture in Minnesota and the Red River Valley (the boundary line between Minnesota and North Dakota) to start germination when this year's flaxseed is planted, but the subsoil moisture is lacking in this area and both top-soil and subsoil moisture are sadly deficient in the central and western part of the Dakotas and also in Montana. Frequent and timely spring and early summer rains will be an absolute necessity.—Archer-Daniels-Midland Co.

Hutchinson, Kan., Mar. 15.—Around Wichita, Newton and here wheat has had a setback from ice covering but has started growth in good shape. Subsoil moisture is in reasonable shape and week-end snow measuring nearly three inches is now melting fast. Locals optimistic over conditions. Shortage of submoisture is bad in the western section but gradually better coming eastward, and wheat condition from Amarillo to Borger shows from poor to fair stand to Berryton, from which place to Enid, Okla., via Woodward and on to here, it makes an average showing. The week-end fall of mixed rain and snow measuring from a quarter to three-quarters of an inch thruout the trip Amarillo to here, while meaning but little in the way of replenishing submoisture, will prove beneficial where top soil was dry in preventing dust storms until surface dries off again.—H. C. Donovan, statistician, Thomson & McKinnon.

Washington, D. C.—U. S. imports of grains July-January, 1936-37, compared with the imports for the like period 1935-36 (in parentheses), were: 8,994 (449) bus. barley; 214,349 (163,484) lbs. barley malt; 31,219 (27,491) bus. corn; 113 (52) bus. oats; 91,231 (15,219) lbs. rice; 3,861 (2,092) bus. rye; 36,438 (29,823) bus. wheat; 9,681 (9,451) bus. flaxseed.—Buro. of Agricultural Economics.

Daily Closing Prices

The daily closing prices for wheat, corn, oats, rye, barley and soybeans for May delivery at the following markets for the past 2 weeks have been as follows:

	Wheat												
	Option	High	Low	Mar. 10	Mar. 11	Mar. 12	Mar. 13	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 19	Mar. 20
Chicago	141½	104½	137½	137½	135½	134½	136½	137	138	138½	136½	138½	139½
Winnipeg	141½	95½	132½	132½	130½	129½	132½	134½	136½	138	134½	138½	139½
Liverpool*	140½	...	133½	134½	133½	132½	135	135½	138½	138	136½	136½	140½
Kansas City	133½	102½	129½	129	127½	125½	127½	128½	129½	130½	128	130½	132
Minneapolis	145½	115½	142½	141½	140½	138½	140½	141½	142½	143½	140½	142½	142½
Duluth	151½	120	146½	146½	145	143½	143½	144½	146	146½	143	145½	147½
Milwaukee	...	98½	137½	137½	135½	134½	136½	137½	138½	138½	136½	138½	139½
	Corn												
	Option	High	Low	Mar. 10	Mar. 11	Mar. 12	Mar. 13	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 19	Mar. 20
Chicago	113½	85	109½	109½	107½	108½	109½	109½	109½	110½	109½	110½	111½
Kansas City	117	89½	113½	113	112	112½	113½	113½	113½	112½	113½	114½	115½
Milwaukee	113½	88	109½	109½	107½	108½	109½	109½	109½	110½	109½	110½	111½
	Oats												
	Option	High	Low	Mar. 10	Mar. 11	Mar. 12	Mar. 13	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 19	Mar. 20
Chicago	54½	38½	48½	47½	46½	46½	47½	47½	47½	47½	46½	47	47½
Winnipeg	58	42½	56½	56½	55	55½	56½	56½	56½	56½	56	56½	56½
Minneapolis	53	39	46	45½	45	44½	45½	45½	45½	45½	43½	45	44½
Milwaukee	54½	40½	48½	47½	46½	46½	47½	47½	47½	47½	46½	47	47½
	Rye												
	Option	High	Low	Mar. 10	Mar. 11	Mar. 12	Mar. 13	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 19	Mar. 20
Chicago	119½	75½	108½	108½	107½	107½	108½	109½	109½	110	108½	110	109½
Minneapolis	114½	73½	103½	103½	102½	102½	103½	104	104½	105½	103½	105½	104½
Winnipeg	114½	62½	108½	108	105½	105½	107½	108½	108½	109½	105½	108½	108½
Duluth	111	76½	103½	103½	102½	102½	103½	103½	104½	105	103½	105	104½
	Barley												
	Option	High	Low	Mar. 10	Mar. 11	Mar. 12	Mar. 13	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 19	Mar. 20
Minneapolis	85½	60½	73½	72½	71½	70½	72	71½	72½	72	71	72	71½
Winnipeg	88½	50½	81½	82½	81½	80½	81½	81½	81½	82	79½	81½	80½
	Soybean												
	Option	High	Low	Mar. 10	Mar. 11	Mar. 12	Mar. 13	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 19	Mar. 20
Chicago	161	120½	155½	154½	153½	153½	155	154½	155½	156	155½	155½	156½

*At daily current rate of exchange.

Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

Altus, Okla., Mar. 18.—No grain in farmers' hands.—J. H. Bailey.

Fellsburg, Kan., Mar. 19.—Very little wheat in farmers' hands.—J. M. Shannon.

Blaine, Kan., Mar. 18.—Wheat in farmers' hands 1%, corn none, oats 10%, rye 1%.—X.

Clay Center, Kan., Mar. 20.—Not much grain left in farmers' hands.—J. W. Pinkerton.

Belmont, Kan., Mar. 29.—About 1% of old wheat in farmers' hands.—Moore Grain Co.

Silver Lake, Kan., Mar. 18.—Grain on hand: Corn none, oats 10%, wheat 2%.—Merillat Bros.

Banner, Okla., Mar. 17.—Very little grain remains in farmers' hands, less than 5%.—Carl W. Vogel.

Carter, Okla., Mar. 17.—No oats or wheat in farmers' hands at present.—Roger Mills Co. Co-op. Ass'n, by Roy Utley, mgr.

Buffalo, Okla., Mar. 17.—Very little old wheat on hand. Nothing but wheat raised around here.—Beeman & Litz, Jim Litz.

Attica, Kan., Mar. 19.—Very little wheat 1936 crop here. Some oats to feed. None to go out of here.—Earl B. Baker Grain Co.

Stratford, Tex., Mar. 17.—No grain of any kind to speak of remains in farmers' hands.—R. E. Roberts Grain Co., L. P. Hunter.

Earleton, Kan., Mar. 19.—No wheat or corn on hand, plenty of oats. No shortage of rough feed.—George Brothers, by E. A. George.

Sublette, Kan., Mar. 19.—No grain of any kind in farmers' hands at this time.—Co-op. Grain Dealers Union, Roy S. Brown, mgr.

Boston, Mass.—February receipts of corn were 1,202,723 bus., and of oats 17,100 bus. compared with oats 11,200 bus. in February, 1936.

Whitten, Ia., Mar. 8.—Grain is pretty well cleaned out of this immediate territory now. Will not be much doing until next fall.—G. D. Mabie Grain Co., by L. L. Hauser, mgr.

Holyrood, Kan., Mar. 11.—Very small amount of old wheat in farmers' hands and business will be slow until harvest.—Holyrood Co-op. Grain & Supply Co., by Sherman Andrea, mgr.

New York, N. Y.—February receipts of grain were: Wheat 132,600 bus., corn 1,587,000, oats 11,000, rye 1,700, barley 1,700, compared with wheat 1,711,900 bus., corn 25,500, oats 43,200, rye 1,700 in February, 1936. February shipments of wheat were 1,417,000 bus., compared with 1,935,000 in February, 1936.—Produce Exchange.

Vancouver, B. C.—February receipts of grain at Vancouver-New Westminster elevators were: Wheat 2,022,738 bus., oats 49,005, barley 2,917, flaxseed 198, compared with wheat 5,803,345 bus., oats 269,705, barley 8,523, rye 1,086 in February, 1936. Shipments during the same period were: Wheat 2,271,277 bus., oats 53,201, barley 3,801, rye 1,546, compared with wheat 10,054,386 bus., oats 505,590, barley 3,523, flaxseed 135, in February, 1936.—E. A. Ursell, statistician.

St. Louis, Mo.—February receipts of grain were: Wheat 708,000 bus., corn 1,944,000, oats 630,000, barley 193,600, soybeans 19,200, compared with wheat 721,500 bus., corn 2,787,300, oats 478,000, rye 36,000, barley 156,800, soybeans 37,500 in February, 1936. Shipments during the same period were: Wheat 778,500 bus., corn 932,000, oats 570,000, rye 6,000, barley 14,400, soybeans 16,000, compared with wheat 679,500 bus., corn 943,050, oats 389,400, rye 34,500, barley 44,600, soybeans 78,500 in February 1936.—Merchants Exchange, W. J. Krings.

Chicago, Ill.—Farm stocks of "corn for grain" Mar. 1 are estimated at 37.7% of the previous crop or 474,314,000 bus. compared with 45.3% or 908,483,000 bus. last year. The per cent of the crop on farms this year is about 2% less than an average per cent on farms Mar. 1. Farm stocks of wheat Mar. 1 are estimated at 14.4% of the previous crop or 90,210,000 bus. compared with 18.1% last year or 113,368,000 bus. Farm stocks of oats Mar. 1 are estimated

at 37.6% of the previous crop or 296,702,000 bus. compared with 45.9% last year or 548,460,000 bus.—R. O. Cromwell, statistician. Lamson Bros. & Co.

Winchester, Ind., Mar. 13.—We are buying considerably more corn than anticipated. It has not been keeping very well in the farmers' cribs and many of them are marketing it to save loss from spoiling. Soybeans put in the bins last fall for seed are coming out containing 2 to 3% more moisture than when they were stored away.—Goodrich Bros. Co., C. C. Barnes, ex-vice-pres.

Decatur, Ill., Mar. 20.—The rapid disappearance of the short crop of corn is not as yet fully realized by the trade generally. The amount of corn moving into consumptive channels by truck has been enormous and truckers are working their way farther and farther north to secure supplies. What little corn is back on the farms is in strong hands and getting harder to buy every week. Arrivals are now showing a larger percentage of No. 3 grades.—Baldwin Elevator Co.

Duluth, Minn.—The Duluth-Superior harbor handled 44,516,627 tons of commodities in and out during the year 1936, an increase of 53% over the 29,134,786 tons moved during 1935. Grain receipts were unusually heavy for the year, large Canadian imports being required to cover the shortage in our Northwest because of crop damage due to drouth conditions. Wheat arrivals had a value of \$18,293,505, barley \$4,490,145, rye \$107,151, screenings \$192,346. Decreases were shown in exports of grain and flour for 1936 under 1935 shipments.—F. G. C.

National Ass'n Appoints Truck Com'ite

Pres. S. W. Wilder of the Grain & Feed Dealers National Ass'n, has appointed a special com'ite to consider ass'n policy and recommend ass'n action on the itinerant merchant trucker problem.

Named to the com'ite are Chester L. Weekes, St. Joseph, chairman; W. R. Scott, Kansas City; Harold L. Gray, Crawfordsville; G. E. Blewett, Fort Worth, and Paul F. Scheuneman, Minneapolis, all men who have studied the problem extensively in its relation to grain distribution.

Grain Grading Schools in Indiana

Under the auspices of the Federal Grain Supervision Schools in grading grain will be conducted at Lafayette Mar. 22-23, in the agricultural building of Purdue University; at Fort Wayne, Mar. 25-26, on the 16th floor of the Lincoln National Bank; at Indianapolis Mar. 29-30, in room 300 of the Board of Trade Bldg., and at Evansville, Ind., Apr. 1-2.

A registration fee of 50 cents per person will be charged. Not more than 50 persons can be accommodated; and those who contemplate attending should write at once to Fred K. Sale, sec'y of the Indiana Grain Dealers Ass'n, Indianapolis, stating which of the schools it is desired to attend. If the enrollment is filled Mr. Sale will suggest some one of the other schools.

The program for each school will be as follows, with some slight changes:

First Day

Registration.

Opening session. Welcome by Acting Dean Freeman. School of Agriculture and Prof. Wiancko, Head of Agronomy Department.

Demonstration in the Proper Use of Equipment. W. B. Combs, Gen'l Field Hdqrs., Chicago.

Wheat Classes—W. P. Carroll, Gen'l Field Hdqrs., Chicago. "Essential Factors in Wheat Grading."

Banquet in Purdue Memorial Union Bldg. "Producing Better Quality Corn." by Mr. J. F. Trost, U. S. D. A., Plant Pathologist, Purdue Experiment Station. Discussion on Hybrid Corn. "Seed Grain Situation." by Mr. Keller Beeson, Agronomy Extension, Purdue Experiment Station.

Second Day

Essential Factors in Corn Grading—Prof. F. E. Robbins, Purdue School of Agriculture.

Essential Factors in Oat Grading—Mr. Carroll, Chicago, Ill.

Laboratory exercises in using grading equipment.

Essential Factors in Grading Soybeans—Prof. F. E. Robbins.

Handling Appeals in Soybean Grading—H. H. Whiteside, in charge, Soybean Inspection, Chicago, Ill.

At the Ft. Wayne school, Thursday evening, March 25, the Allied Mills and the Mayflower Mills will furnish a free dinner to those registered at the school, which will be served at the Chamber of Commerce Building. Mr. Trost of the Purdue Experiment Station will talk on "Producing Better Quality Corn" and discuss Hybrid Corn.

A. C. Barbeau Passes On

The grain industry learns with deep regret of the death of Mr. A. C. Barbeau, pres. of the S. Howes Co., Inc., Silver Creek, N. Y. Mr. Barbeau died at the General Hospital, Buffalo, Mar. 16.

To Mr. Barbeau's executive and financial ability, untiring energy, keen foresight and indomitable will the huge Eureka and Invincible works at Silver Creek, daily turning out a large volume of grain and seed cleaning, flour pack-



A. C. Barbeau, Silver Creek, N. Y., Deceased.

ing, and canning machinery, stand as a worthy monument.

Mr. A. C. Barbeau's early training led him up thru the ranks in the business his father, Louis E. Barbeau, acquired from Simeon Howes, founder, and eventually he took over the management. His progressive policies continued the growth and rounding of the S. Howes organization until it served several industries in addition to the grain and seed trades, and feed mills, including rice and coffee plants. The growth of the company brought absorption of the Invincible Grain Cleaner Co. in 1924, the S. Howes Co. with Mr. Barbeau as pres., continuing operation of both factories.

It is said of Mr. Barbeau that he never had anything done by hand that might be done better by machinery. Under his management both factories became models of efficiency in production, where skilled craftsmen were carefully protected with safety devices, and supplied with the proper tools to make precision built, long wearing machines.

Indiana Convention Favors Fair Income Tax

Legislation, trucking and foreign clover seed were primary subjects before the annual convention of the Indiana Farmers Grain Dealers Ass'n, meeting at Huntington, Mar. 12 and 13. Business sessions were held in the Elks Club. Registration was conducted by representatives of the Grain Dealers Fire Insurance Co., which supplied the identification badges.

Friday Morning Session

PRES. H. O. RICE, Huntington, presided at the opening session.

SEC'Y W. L. WOODFIELD, Lafayette, reviewed local meetings held by the ass'n during the last summer.

PRES. RICE delivered his annual address, briefly reviewed as follows:

Prices for farm products are set by supply and demand. An important factor is the competition that seeks to handle farm products. This competition gives the farmers maximum available prices at all times.

Agricultural production moved westward with the building of railroads that could bring the crops raised back east to consuming markets. In the early days wide margins were necessary, due to the heavy rates of interest on money borrowed for construction and working capital. Unfortunately, after interest rates were reduced margins were not narrowed until competition stepped in. Then, in many cases, margins were narrowed too much.

Interchange of ideas is one of the causes for organization. Grain dealers coming together will exchange ideas and opinions that help solve many of their problems.

It can hardly be held equitable that government should help farmers more than any other class of business. The purpose of government is to govern, fairly and equitably for all interests, and all interests should contribute an honest share in the costs of government. It is not fair that some classes should be exempted from their responsibilities thru a paternalistic attitude on the part of government, to the disadvantage of other classes.

Friday Afternoon's Session

D. F. MITZNER, Indianapolis, sec'y of Indiana's Traffic Ass'n, first speaker at the second session, claimed business has room for all forms of transportation in their natural fields. Historically outlining the development of transportation, he called attention to the opposition that developed at each transition in form. A half century from now further new development will likely be meeting with opposition in the same manner that trucks are now being fought.

More than a fair share of taxes are being paid by trucks. In Indiana truck taxes total more than \$10,000,000 annually, enough to build all of the roads that the state has under construction.

In Indiana no property tax has been assessed for road building since 1923. Special taxes on trucks and buses have built the roads. In ton miles, trucks are handling only 5½% of the traffic, railroads 80%, boats and barges 14½%. One-third of Indiana's 3,000 communities are not served by railroads. Nevertheless these communities get along very nicely with truck service and some of them enjoy rates considerably lower than those demanded by the railroads.

M. O. PENSE, Purdue University, talked on seeds, stressing the importance of adaptability, recalling the case of a carload of seed corn from Nebraska that was planted in an Indiana community, resulting in a loss of 300,000 bus. of corn to the community because the unadapted seed failed to yield as well as adapted local corn.

Fancy titles do not make seeds adaptable or high in germination, claimed Mr. Pense, recommending among oats suitable to Indiana conditions, Minota, Gopher, Wayne, Wolverine, Cartier, Iowar and Iowa 103.

Old varieties of soybeans have been displaced by improved varieties more suitable to production of hay and seed. Recommended are Dunfield, Mandell, Illini, Manchou, Mansoy, Haberlandt,

Sciota and Mukden of the yellow varieties; Kingwa, Wilson, Sable, Laredo and Virginia among the black and brown varieties.

Using charts, Mr. Pense illustrated the germinating and crop producing ability of domestic and foreign clovers, claiming inferiority for the foreign seed, even when from northern latitudes.

FRED K. SALE, Indianapolis, sec'y Indiana Grain Dealers Ass'n, talked on legislation. Among the bills he mentioned as having been passed and of interest to elevators were:

1. A truck bill reducing the license fee on 1-1½-ton trucks and adding to the license fee another \$2 to \$4 fee based on the size of the tire, applicable to all trucks.
2. A labor bill penalizing employers, but leaving strikers unrestricted.
3. A garnishee bill.
4. A taxpayers bill.
5. A bill to license collection agencies, requiring a \$250 license fee and a \$2,000 bond.
6. A bill to require grain and seed dealers to keep a record of truckers served, showing license numbers, names of drivers, and source of merchandise, in order to prove fraud when it occurs.
7. A full crew bill, requiring railroads to carry full crews on restricted train lengths.
8. An occupational disease act, carried as a rider on the employer's liability law.
9. The chain store tax bill was killed.
10. A desirable change in the Gross Income Tax bill gives retailers from \$1,000 to \$3,000 exemption.

Mr. Sale announced grain grading schools will be held this spring at Lafayette, Ft. Wayne and Indianapolis.

WALTER PENROD, South Whitley, ably reviewed the Robinson-Patman Act, calling attention to the lack of federal trade commission and court decisions to clarify ambiguities in its wording.

PRES. Rice appointed the following com'ites:

RESOLUTIONS: W. W. Pearson, Reynolds; J. W. Lightfoot, Warren; D. W. Biddle, Remington, and Joe White, Schideler.

NOMINATIONS: Roy Camp, Monticello; Chas. Sowers, Peabody, and Amos Tharp, Warren.

Banquet

An excellent banquet was enjoyed Friday evening by 250 delegates gathering in the dining room of the Masonic Temple. Music, singing and several pieces of entertainment preceded the featured speaker of the evening, Wheeler McMillen, New York City editor, in "Whither Now, America?"

"Agriculture's principal duty," declared Speaker McMillen, "is to supply food and clothing for all Americans, a job it can perform with one hand tied behind its back."

"Scientific research has opened new fields for farm production, among them production of soybeans for oil, feed and industry, and timber for paper making."

"The federal department of agriculture has never had sufficient money to carry on intelligent and efficient scientific research in creating new markets and uses for farm products, but it has spent millions on less worthy causes."

Saturday Morning Session

At the closing session of the lively two-day meeting the following resolution was adopted:

INCOME TAX EXEMPTION

THRUOUT Indiana are small corporations, handling farm products and selling farm supplies exclusively. They are in direct competition with (a) partnerships and (b) cooperative ass'ns.

Partnerships pay no federal income tax, as such. The profits are distributed to the partners, who as individuals are credited with from \$1,000 for single persons to \$2,500 for married persons, plus additional exemptions for dependents. Cooperative ass'ns are not taxable, altho the profits go directly to individuals who own shares.

Profits, if any, of these small corporations, dealing likewise in farm commodities, go to the share holders only after first paying federal income taxes.

It is the sense of the members of the Farmers Grain Dealers Ass'n of Indiana that ass'ns performing essentially the same service, engaged in the same business, that of merchandising farm products, should stand more nearly on the same basis with respect to income taxes; and that an exemption of \$3,000 should be granted to corporations dealing exclusively in farm commodities and supplies.

Election of officers placed for the ensuing year: Frank Pyle, Van Buren, pres.; Paul Dawson, Wolcott, vice-pres.; W. L. Woodfield, Lafayette sec'y-treas. Elected to the board of directors were Walter Penrod, South Whitley; Fred Dahl, Lowell; John Witte, Hoagland; L. F. Clupper, Rich Valley; Roy Camp, Monticello, and retiring pres. H. O. Rice, Huntington.

Adjourned *sine die*.

Pea Dealers Organize

The National Dried Pea Dealers Ass'n was organized during the Cannery convention in Chicago this winter. C. B. Pyle, Cleveland, O., was named pres.; Joe Zeb, Moscow, Ida., vice-pres., and to the board of directors were elected G. A. Meyer, Chicago; A. V. Smith, Marcellus Falls, N. Y.; Herman Wilson, Moscow, Ida.; L. W. Van Fleet, Denver, Colo., and F. P. Sloan, Dayton, Wash.

With the best interests of the growers and processors at heart, the new organization will strive to stabilize the industry. Included in the membership are pea splitters and dried pea dealers. Annual sales of split and dried peas are estimated at \$15,000,000.



Harbor Commission Elevator, Memphis, Tenn., in Course of Construction. [See facing page and front cover.]

River Elevator at Memphis

Large storage capacity at low cost per bushel characterizes the new public elevator at Memphis, Tenn., in design resembling similar houses at Albany, N. Y., and Omaha, Neb.

The 14 concrete bins in 2 rows of 7 each are 26 ft., 8 ins. in diameter by 95 ft., 6 ins. high, and have an approximate capacity of 500,000 bus.

The bulk storage bins in the tent-roofed section of the structure have a capacity of 1,000,000 bus.

A 12,000-bu. main leg lifts the grain in the elevator, and a 10,000-bu. marine leg unloads barges, with a range in water level of 40 ft. Barges also can be loaded at the water side. The main leg has 2 rows of 8x7 Calumet Buckets, and the marine leg one row of 8x7 Calumet Buckets. The marine leg is counterweighted to rise and fall with the level of the river.

From the head house grain is carried into the cupola over bins on 24-in. belt, and a similar belt carries grain out of the tunnel under the bins.

The three tent-roofed bins, one on one side and the two on the opposite side of the tank structure have concrete floors and Armco sheets on the inclined side resting on the earthwork where the support is on piles preserved by creosoting. From the tops of the piles a roof of 20-gage steel strips about 30 ins. wide runs 80 ft. to the cupola. The piles are cut off about 8 ft. above the embankment top where they are capped with a steel channel to provide fastening for the roof sheets. A deadman outside the wall offsets the pull of the roof sheets, which are welded together to make a rain-tight joint.

The equipment of machinery includes a Clipper, a Separator, a 2,500-bu. Fairbanks Scale, car shovels and motors. In the track shed is an unloading pit. The facilities provided for unloading and loading trucks in bulk, for sacking and for shipping in sacks to trucks or railway cars, and bulk shipment in cars. A sulphuring equipment is provided for improving the quality of oats.

Successful operation of the plant is assured by the increasing volume of grain waterborne, particularly from Illinois River points.

John B. Edgar, chairman of the Memphis Harbor Commission, worked for years to bring about the construction of an elevator at this port. A. P. Fant, industrial commissioner of the Chamber of Commerce, aided in bringing the promotion to the point of actual construction. The work was done partly under a P.W.A. grant.

The Macdonald Engineering Co. designed the plant and supervised the construction, Wm. B. Fowler, city engineer of Memphis, having had charge of the carrying out of the work. The S. & W. Construction Co. had

contract for excavation and the Nicholson Co. held the contract for building and machinery.

Cargill, Inc., operates the plant under lease from the City of Memphis Harbor Commission, with L. LaPlante as superintendent.

The Gas and Oil Sideline

By EARL STEELE, CISCO, ILL.

Probably no sideline an elevator may choose is without competition already in the community. Gasoline and oil is no exception. On entering the field it is much wiser to buy out someone already established than to start new and fresh, rather than to increase competition, encourage cut prices, and start a war.

Our own experience has been favorable in spite of a fresh start with four 8,000 gallon tanks, pumps and other stock equipment valued at \$1,760, plus a four compartment truck tank valued at \$305, and a truck. Our total gallonage soon ran up to 160,000 annually, making a gross profit, with the oil, of \$4,900, a net of \$3,600. But how it did run up the book accounts! The total mounted to \$15,000 at the peak. We were no longer bothered with farmers wanting advances on their grain to pay off their gas and oil accounts. We had the accounts. And it took earnest effort to reduce them.

Our competition, one private dealer and four tank trucks that enter the territory, had not been idle. Its latest development is the "barrel head" price, meaning a discount for cash.

But we are glad we entered the field, sticking to a nationally advertised brand of gas, with gasoline company protected margins in case of price wars. The coal business, ravaged by itinerant truckers bringing coal from nearby mines and slashing prices, has gone to pieces, and the gas and oil business has filled its place.

Washington, D. C.—During the fourth quarter of 1936, an average of 2,024 mills reported grinding 118,195,229 bus. of wheat into 25,716,576 bbls. of flour, and 2,136,870,380 pounds of offal, reports the Bureau of the Census.

The wheat market shows very plainly that there is no immediate pressure in sight on part of actual owners of cash wheat, as it is the consensus that whatever wheat is left in various positions will all be wanted, with the minimum of reserves until the new crop is available in commercial quantities. The fact that Argentina shipped again about 8 million bus. might eventually satisfy the needs of European millers, and any let-up in the foreign demand might change sentiment quickly. Inflation fears will continue, and undoubtedly be responsible for a higher price level than would otherwise exist.—Uhlmann Grain Co.

Interrelationship of Grain at Various Points

By J. M. R. GLASER, Chicago, in Lecture Under Auspices Ass'n of Grain Commission Merchants

Grain may be sold in several different ways, among these "in store," meaning that the grain is stored in an elevator and a buyer receives warehouse receipts covering the grain that he has purchased, but he must pay all loading out costs. It may be sold f.o.b. boat or f.o.b. cars, meaning "free on board." In other words, all of the cost of inspection, weighing and elevation of the grain is absorbed entirely by the seller. Grain is also sold c.i.f. a certain port, as for example, c.i.f. Buffalo, meaning cost of insurance and freight on this particular lot or lots of grain, are all paid by the seller, so that the price quoted (which please do not forget is the basis relative to the futures, not a flat price) includes all cost of moving the grain from Chicago or whatever point it is shipped from, to the specific elevator at Buffalo or whatsoever port it may be.

Freight rates on all rail movement are fixed, with tariffs issued and filed with the Interstate Commerce Commission. The same does not obtain, however, with respect to boat lines, in that there is an open market in freights which applies to lake as well as ocean tonnage.

Export business is divided into three categories.

- Directly with importing nations.
- F. O. B. ocean vessel, buyer's call.
- Track or c.i.f. the port of exportation.

In the first case, grain is offered by cable at the close of business every night to importing firms on the Continent, Great Britain or whosoever they may be, with the understanding that acceptances must be received prior to the opening of the exchange the following day. In the second case, grain is offered f.o.b., that is to say, free on board the buyer's ocean vessel at port of exportation, as for example, the port of New York, subject to buyer's call, that is, subject to being loaded out on his instructions during a certain period of time. For example, it might be buyer's call first 10 days of July, first half of July, etc. In this case the grain is sold on a basis, not at a flat price as obtains in the first case. In the last case, the grain is sold by an inland grain firm to the exporter, delivered at the specific port by rail or as in the case of Montreal for example c.i.f. that port, shipment by water out of one of the western lake ports. Time of shipment is an integral part of all grain sales, as well as the terms; namely, the weights and grades at the point of sale.

F. A. Q.—The United States and Canada are the only exporting nations who offer their grain overseas on a definite grade placed on this grain when it is loaded on the ocean vessel. The importance of this to the producer cannot be overstated, for with the knowledge of the grade it is not necessary to make allowances when figuring prices for possible subsequent adjustments. In the case of the Argentine, Australia and other exporting nations, sales are made on what is known as an F.A.Q. basis, that is basis of fair average quality. In the event that the grain upon arrival at the buyer's port does not measure up to what is considered as fair average quality of the crop, samples are drawn by an independent party, and an average of all these samples together with other data, is then forwarded to London for arbitration on their Exchange as to what discount, if any, is to be allowed. All of this is pursuant to the terms of the contract employed in the movement of grain in export channels.

Grain in Remote Positions Affects Chicago Futures—We have attempted in this



Concrete Tanks, Earth Embankment and Creosoted Piles Supporting Tent Roof of River Elevator at Memphis, Tenn. [See facing page and outside front cover.]

Country Feed Plant Grows

discussion to cover a subject which is exceedingly broad in its scope, but it has been possible to touch only upon the highlights. However, there is one observation which is all important, namely, that grain at all markets has a definite and distinct effect upon the trend of futures prices here. Large deliveries of grain on futures contracts at Minneapolis, for example, may be received by people who can find no ready outlet at the moment. It accordingly may be necessary for them to liquidate their position thru the retender on futures contracts, with the result that the difference between Minneapolis and Chicago will tend to go to a full shipping difference. Because of this, sizeable quantities of the grain might be purchased for Chicago and subsequently tendered on futures contracts here.

While it is true we have primarily mentioned the question of the elevator firm or warehouseman purchasing the daily arrivals of grain, the fact remains that there is also the miller, the processor, the feed mill and many others who are in the market to provide for their requirements. Thus, there is competition at all times in the buying of grain, with the consequence that the grain goes to the highest bidder. On the other hand, when it comes to selling the grain, the same keen competition exists with the ultimate buyer naturally endeavoring to make his purchases as cheaply as possible.

The result of this competition at both ends of the marketing system brings about a most desirable effect, in that it tends to decrease the spread between the producer and the ultimate consumer and reduces it to a point where beyond the actual transportation costs, fixed charges, interest and insurance, the gross margin of profit obtained is the smallest on a percentage basis, of virtually any industry.

To sum up the situation the following pertinent facts are outstanding. First, that the basis at which cash grain is selling, that is to say, the difference between the cash price of the grain and the futures is all important. Second, that the basis at which contract grades are selling is important, not only in the Chicago market itself but in all other markets. Third, that the relationship between the Chicago futures and others is at all times of importance, but especially so when considered from the standpoint of the basis or relative value at which the cash grain is selling in other markets. Fourth, that the present marketing system has evolved over a long period of time rather than being set up in an arbitrary fashion and that Board of Trade rules and trade customs are entirely the result of this evolution.

To use a homely metaphor, the grain trade is driving the 1937 model of a well-known car, not a 1905 Haynes-Apperson. Fifth, that the Principle of Equilibrium as we have termed it, is always at work and, as can be readily seen, is of incalculable value to the producer and consumer alike. Above all else, it should be recognized that facts concerning daily transactions and prices are known facts, available to all, available equally to the producer in the country as they are to the man on the floor of the exchange. The only conclusion that can be drawn from all of the foregoing facts is that the much to be desired result of securing for the producer the greatest share of the consumer's dollar is apparently as close to realization as is physically possible at the moment.

Industrial activity in the United States has improved, but there is room for greater improvement, the 1936 index standing at 88.2% of 1929, while in Great Britain the index stands at 114.1% of 1929. Were industrialists in the United States assured of sound money, a balanced budget and protection against mob rule production would break all records, as it is doing in some foreign countries.

This is the story of a new feed mill built for the Fairview Farmers Elevator Co., at Fairview, Ill. Properly, it is also the story of Willard R. Willcoxon, the company's general manager, who was born in a log cabin, learned his ABC's in a little red school house, spent five years as a country school master and got his early training buying grain as an agent for the Bader Elevator Co.

Seven years as a line elevator agent prepared Mr. Willcoxon to try his own wings. Opportunity knocked when a small, one man farmers' elevator at Fairview made known that it needed a manager. Mr. Willcoxon took the job, acted as manager, bookkeeper and elevator man, and began to build the dreams he had dreamed while a line house agent.

Today Mr. Willcoxon's glance, as he goes from department to department in the \$70,000 business he has built, spans two decades to recall the 22,000 bu. elevator, the meagre little wooden office and the wagon scales of which he was both boss and working staff when he took the job. The elevator still stands, greatly improved, of course, and is used daily, but the office is now of brick, and the 20-ton Fairbanks truck scale has a type registering beam.

Fanning out from the original elevator are several other buildings, each marking another step in the expansion of the farm service. Every department is Mr. Willcoxon's pet. He will enthuse about each, in or out of turn. The farm machinery warehouse, for instance, with its big stock room for parts, and its complete repair shop that can rebuild a tractor even down to the paint job; or the 32x100 ft. seed warehouse which is kept filled with retail stocks of farm seeds in the winter and spring months, and in the fall is kept busy cleaning and preparing farm seeds for market or resale.

A long shed houses fencing and drain tile. In a connecting room is kept a stock of builders supplies. Farm hardware needs are stocked in a separate department. In a small building, setting across the street from the general plant, an old harness maker, early stockholder and director of the company, sells and repairs harness.

Feed grinding and mixing began its expansion from simple custom work eight years ago, when Ora Bell, one of the employees, suggested to Manager Willcoxon that the company could make and sell branded feeds if it had some good formulas. A variety of formulas for poultry feeds were promptly concocted, arrangements

were negotiated with the Spoon River Hatchery to test the feeds, and the hatchery recorded the feeding results under practical conditions.

When the formulas became fixed and established Mr. Willcoxon pushed the sale of "Start-Em-Rite" chick starter, "Fairview Grower," "Farmers Egg Mash," and "Laymore Scratch," with an earnest program of advertising in local and county newspapers, and regular mailings of broadsides to the farm trade. The company's poultry feed business expanded rapidly, bringing with it an increased volume of grinding and mixing of dairy and hog feeds to suit farm feeding plans. Dealers in some of the surrounding towns asked for wholesaling privileges. Last year the company's original mill burned, yet the volume of feed business totalled \$21,961.10. Work was promptly begun on a new, larger, more efficient plant.

Manager Willcoxon and Ora Bell are proud of the new 40x70 ft., three-story, frame, iron-clad structure. On its east side is a 12x40 ft. driveway, fitted with a Western traveling electric truck lift to dump incoming loads into a 200 bu. pit. On the north end is a 12x30 ft. service driveway, with easily operated sliding doors at each end. Here a farmer pulls a 14 inch telescoping spout well down into his truck's bed to receive ground grain from the collector of the grinder; or lowers an 8 inch spout to receive mixed feeds in bulk from the feed mixer.

One side of the building is a long, 20x70 ft. store room and sacking room, a part of which is used for display purposes. At the south end of the building is another 20x30 ft. ware room, principally used for purchased feed ingredients. Half of the second floor is a series of eight bins for small grains and meal, a larger bin for shelled corn, a bin for husks and a bin for cobs.

Two legs, carrying 6x12 inch buckets, are operated together by a 10 h.p. motor at the top of the house, thru a line shaft, belt and chain drives. From the same line shaft is run a revolving husk reel and shaker, separating cobs and husks for delivery to their respective bins.

A diverting valve in the Western drag that draws grain to the machinery in the basement, may be set to direct ear corn into a 200 bu. per hour Sidney corn sheller, which screens the shelled corn from the cobs and husks and delivers them to separate legs, for elevation to the top of the house.

If the sheller is not in use the drag pulls its



Ora Bell, Head of the Feed Department, Confers with General Manager W. R. Willcoxon, Fairview, Ill.



The New Feed Mill, Fairview, Ill., and General View of Properties.

load to a by-pass which sieves small grain into a leg boot, but continues ear corn into the mouth of crusher, driven by a 15 h.p. motor, thru which ear corn must pass before delivery to leg boot.

Electrical controls for the elevating as well as the grinding and mixing machinery, are assembled in one corner of the mill room. In this main floor room is the big 32 inch double runner attrition mill with two direct-connected 40 h.p. motors. Above the mouth of the mill is a feed spout, generously filled with magnets, and a specially designed agitator that feeds grain or crushed ear corn into the mill. A series of rope controls operate butterfly or shut-off valves to draw grain into the mill from any of the bins on the second floor, and manipulate other spout controls.

Meal drops from the mill into the air stream from a 34 inch blower, run by a 15 h.p. motor, in the basement, for elevation to a collector on the roof of the plant, and gravity delivery to bins, mixer, sacking spouts, or the bulk service chute. Below the mill room floor, reached thru trap doors, are two small hoppers, with Letz percentage feeders in their bottoms, adapted to the special needs of the mill. These feeders control the flow of hog concentrates into the pneumatic elevating system with the meal from the mill to make a balanced hog feed without passing thru the feed mixer.

The 1½ ton vertical feed mixer is in a corner on the second floor, and driven by an individual

5 h.p. motor. Meal, concentrates and ingredients are elevated to the mixer thru a second pneumatic system, with 10 h.p. motor and 28 inch fan in the basement. Spout and hopper inlets into the system give flexibility in operation. The completed feed, after mixing, may be dropped back into this air system for elevation into bins.

Also on the second floor is a corn cracker and grader, served from a garner bin that is kept filled with shelled corn by a small leg with 4x8 inch cups. Both the leg and the cracker are run by belts from a line shaft driven by a 15 h.p. motor. So large a motor is used because the company intends soon to install a set of rolls and a stone buhr on the same floor for manufacture of whole wheat and buckwheat flour.

Buckwheat is one of the commodities raised extensively in the Spoon River country. Farmers use discs to seed it on wheat land just as soon as the wheat is harvested, thus making the land raise two crops instead of one. A share of the 200 carloads of grain annually shipped by the Fairview Farmers Elevator Co. is buckwheat, tho fewer carloads of buckwheat are shipped than of corn, wheat, soybeans and oats. Farm seeds are also among the commodities the company ships. Cleaned clover seed alone annually accounts for between 15 and 20 cars.

The new feed mill marks the latest step in a business pattern that Mr. Willcoxon began to trace a quarter of a century ago, an open pattern that has sought and quickly seized new

opportunities. Today the company regularly keeps 14 employees. Among its department heads are several university graduates. But the real credit for the company's achievements belongs to Mr. Willcoxon's progressive spirit, his organizing ability, and his selection of men to head the different departments of the business. The pattern is not ended. New opportunities lie ahead.

Over the door to Mr. Willcoxon's inner office hangs a thin, framed sign, the black of its lettering still prominent, the red faded by age: "Mr. Salesman: Please wait until you are invited in here." To salesmen who do not know him the sign may appear an affront, but to Manager Willcoxon it means simply, "Please wait a moment until I finish what I am doing, so that I can give you all of my attention."

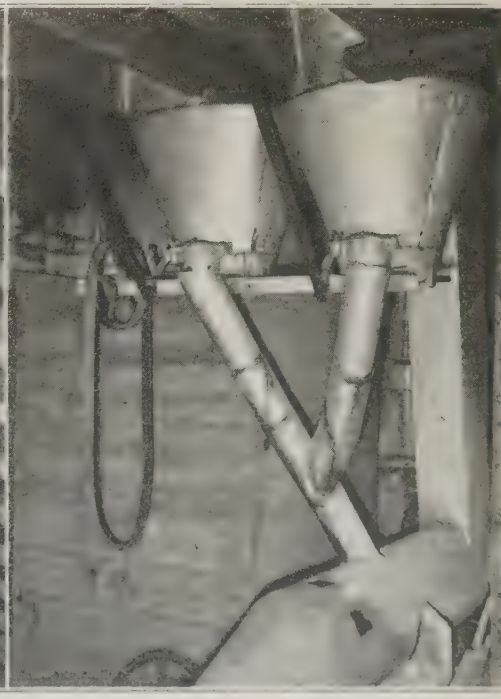
Cedar Rapids, Ia.—"In its (federal trade commission's) preliminary report," says Pres. S. W. Wilder of the Grain & Feed Dealers National Ass'n, "the cost of a pound loaf of bread is broken down into percentages for the various agencies from farmer to consumers. It shows the 'wheat middleman and transportation' taking 'about 5%' of the 8.3c cost of a pound of bread. Even tho the important transportation charges are added to the charges of grain handlers, the cost of these services combined is well under one-half cent per pound of bread."



One and One-half Ton Vertical Feed Mixer.



Bulk Meal and Mixed Feed Spouts in Service Driveway.



Percentage Feeders for Mixing Hog Feeds

Interior Views Farmers Feed Mill, Fairview, Ill

Wheat Price Factors

Excerpt from lecture by MARK W. PICKELL, Chicago, under auspices of Ass'n of Grain Commission Merchants.

There is a definite relationship between the price of wheat or corn (and it holds good for all other commodities that are not a natural monopoly), and the general average of commodity prices. That relationship is preserved so long as the supply and requirement are balanced.

Economic Duty of Price.—The economic function of the price is to regulate the supply to the requirement, and to move that supply into consumption. Too little attention is paid to this economic duty of the price. It is either not known or ignored by most persons in reference to the price of wheat. It is too often lost sight of in discussions of the marketing machinery. But it is vital. Artificial interference with that economic duty has resulted disastrously every time it was attempted since commerce began.

That the market does perform its economic function in a most creditable manner is amply proved by the record of the years from 1896 to 1929. That disaster results when the price is interfered with is proved by the results following the Farm Board activities from 1929 to 1933. While the world visible does not contain all of the carryover wheat, yet the carryover in other places follows very closely the changes in the world visible. Despite changes in the world supply from year to year, often amounting to half a billion bushels of wheat, the distance between the total of supply, the top curve, and the world wheat disappearance, the lower curve, during those years from 1896 to 1929 was very nearly the same year after year. And, whether the supply was above or below the average or normal, there was always a carryover, but the big bulk went into consumption. The price performed its economic function.

Running thru that curve of world wheat supply is a dotted curve of the population of the United States. That population increases at about the same ratio as world population, so this really gives us a comparison of world wheat production and world population.

Larger Supply Forces Wheat Price Below Average of Commodities.—It is to be noted that at times the world supply was above this normal as established by the population curve. At such times the price of wheat invariably

dropped below its 1909-13 relationship to the general average of commodity prices. During the war years, with men engaged in destruction instead of production, the supply dropped well below the normal as shown by population, and wheat prices rose to the highest levels in history. In fact, they fixed the price—a *maximum* price despite the assertion that it was done to prevent wheat from going to \$1.50 a bushel. And there was no worry about keeping the price up to that maximum.

But when the war was finished the wheat supply once more advanced to a level comparable to the normal established by the population curve, and during the period from 1924 to 1927 stayed very close to this curve, with the result that the price of wheat pivoted back and forth in normal relationship to general commodity prices. But then came the Canadian Pool and the Federal Farm Board activities, with the result that the supply went not only to the highest levels in history, but to a level very high in relation to the established normal as indicated by population. The inevitable result was a price low in actual cents and also extremely low in exchangeability for other commodities.

In 1934 the world supply dropped below its normal, and wheat prices advanced. But let us examine it a little more closely from the relationship of import requirements and export surpluses.

When the Federal Farm Board came into existence in 1929, Europe did everything in its power to get on a domestic or self-sustaining basis. High protective tariffs were established, giving every incentive to home farmers to increase acreage. During 1931 to 1933, when Argentina and the United States and Canada were selling wheat in the open market at 40c to 65c a bushel, the tariffs into Germany, Italy and France were so high that this same wheat would retail for over \$2.00 a bushel. Wheat became a luxury. Under this spur, acreage in the 18 most important import nations increased from 48,752,000 in 1929 to 53,317,000 in 1933. Nature was kind and sent large yields per acre, with the result that while their consumption of wheat was at the peak of all time, their imports declined

from 525 to 657 million bushels annually in the period from 1923 to 1929, to only 393,265,000 bus. in 1933, 373,052,000 bus. in 1934, and 357,500,000 bus. in the crop year 1935-36.

The crop of 1936-37 dropped down until it was below a billion bushels for the first time since 1931. If Europe were to take a quantity necessary to bring its supply up to the requirements, then it would need between 478 and 518 million bushels during the current crop year. Adding on 147 million bushels for other countries, including the United States, this would give theoretical import requirements for the 1936-37 crop year of 625 to 665 million bushels. But they cannot take this much for the simple reason that it is not available.

It is an old economic maxim that the demand for the 10th bushel brought to market sets the price for the other nine. And so it is that the demand for the export surplus sets the price for all wheat in the export nations or in the world market. Thus the problem in any market analysis is to determine the relationship between the export surplus and the import requirements.

Buffalo Ex-Lake Rates Readjusted

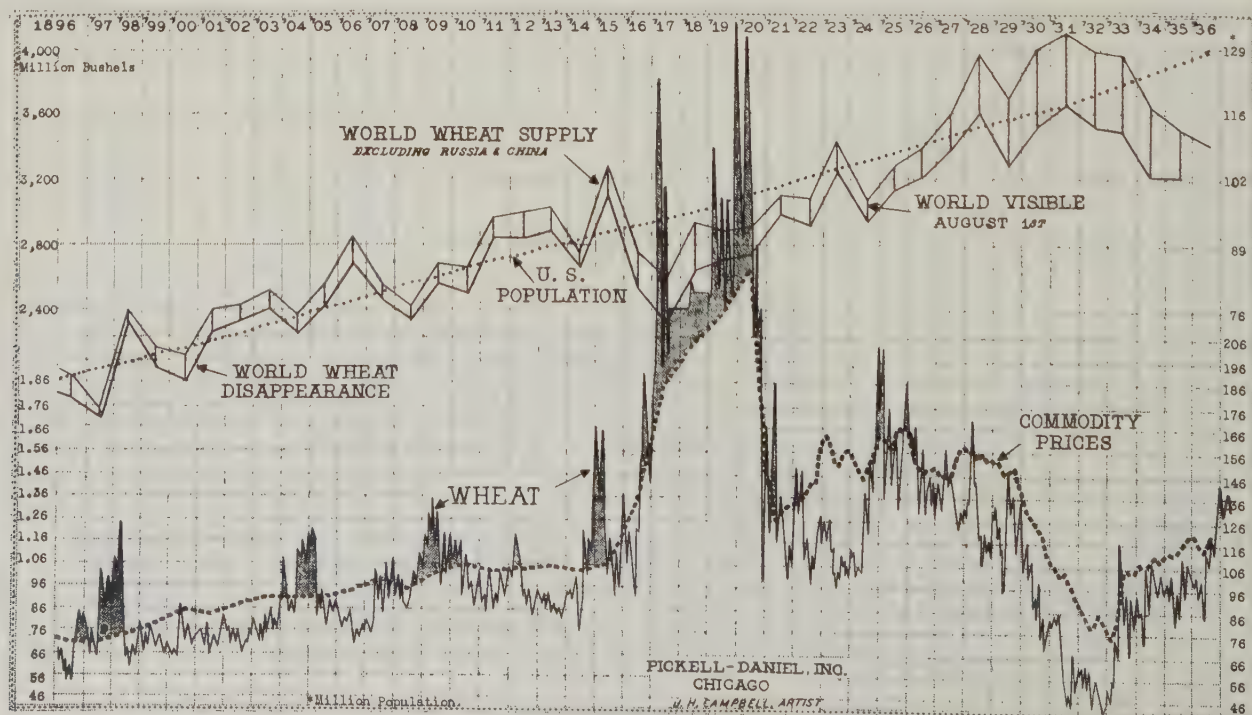
Ex-lake rates on grain from Buffalo and other United States lake ports for export have been readjusted, effective Apr. 1.

Ex-lake Buffalo rates, including a charge of not more than one cent per bu. made by elevators for elevation and transfer from lake vessels to cars, including 5 days' storage, will be: To Boston, Mass., domestic 21.17 on wheat, 21.29 on corn and rye, 21.07 on oats, 21.58 on barley. To Rockland, Me., domestic, 2c higher than the Boston rates. To New York, Philadelphia and Baltimore, domestic, 18.67, 18.79, 20.13 and 19.08, respectively.

To Boston, New York and Norfolk, export, effective Apr. 1, 8.33 on wheat, 8.45 on corn and rye, 9.79 on oats, 10.24 on barley. To Philadelphia and Baltimore, same, 7.83, 7.95, 9.29, and 9.74, respectively.

To Boston, New York, and Norfolk, export, effective Dec. 1, 10.83 on wheat, 10.95 on corn and rye, 12.29 on oats, 12.74 on barley. To Philadelphia and Baltimore, same, 10.33, 10.45, 11.79, 12.24, respectively, per 100 pounds.

Soy beans for export will take the same rates as wheat.



World Wheat Supply, Disappearance, and Price Movements from 1896 to 1936, inclusive.

Grain Carriers

A series of regional meetings are being held by the Central States Motor Freight Bureau in an effort to reduce truck commodity tariffs in C. F. A. territory to five publications.

Spokane, Wash.—Financing with an assessment of \$1.50 per 1,000 bus. of wheat produced the newly organized Inland Empire Wheat League will raise \$15,000 to fight proposed increases in grain rates.—F.K.H.

In No. 26843, dismissal is proposed for the Allen & Wheeler Co.'s complaint against rates on grain and grain products from western and central freight ass'n territories to Kentucky, West Virginia, Virginia and Tennessee.

Washington, D. C.—Grain and grain products were loaded into 28,671 cars during the week ending Mar. 6, compared with 36,960 during the like week of 1936 and 26,975 in the same week of 1935.—Ass'n of American Railroads.

Kansas City, Mo.—The 47th annual meeting of the Trans-Missouri-Kansas Shippers Board re-elected Clyde M. Reed, Parsons, Kan., chairman; Carl Glessgow, St. Louis, vice-chairman; E. H. Hogueland, Kansas City, alternate chairman, and P. W. Coyle, St. Louis, general sec'y.

Congressman S. O. Bland (Virginia) has introduced in the House an amendment to the Interstate Commerce Act to give the Interstate Commerce Commission regulatory control over public wharfingers, requiring filing of tariffs and 30 days' notice of any changes in rates, charges or regulations.

Atlanta, Ga.—The Interstate Commerce Commission hearings on southeastern grain rates, originally scheduled to start Feb. 16, has been postponed to begin Apr. 7, due to delays caused by hearings on the general freight rate increase, and the Ohio Valley flood. Cases to be heard include I. & S. Nos. 4208 and 4229, grain rates Texas to southern territory, and Docket 17,000, Part 7, rates within southern territory.

Duluth, Minn.—Cargill, Incorporated, has announced the purchase of the steamer W. D. Rees from the Wilson Transit Co., Cleveland, O. The freighter is of the four-hold type with a capacity of 300,000 bus. wheat and wintered here, with repairs and outfitting now going on in preparation for the opening of navigation, expected about April 15. The freighter will be engaged in movement of grain between the various terminal elevators of the Cargill interests, located here, Milwaukee, Chicago, Green Bay and Buffalo.—F.G.C.

Minneapolis, Minn.—Opposing interests have protested to the Interstate Commerce Commission efforts of the Twin Cities to win reduced proportional grain rates from Minneapolis to Chicago, contending reductions would bring Canadian wheat into Minneapolis for milling in transit and shipment east. J. G. Bruce, of Montana's Board of Railway & Public Service Commissioners, says: "Canada does not grade her wheat for protein content, but, instead, sells on the basis of hardness of the wheat and the season in which it is grown."

Chicago, Ill.—The Interstate Commerce Commission order of Jan. 19, requiring all motor vehicle contract carriers to file with the Commission copies of written contracts and memorandum of oral contracts covering charges, was opposed by shippers' counsel John L. Burchmore at the hearing on Ex Parte Mc-9. The order is beyond the jurisdiction of the Commission, which is limited by section 218 (a) of the Motor Carrier Act, he contended. Supporters of the Commission's order believe it will separate con-

tract carriers from common carriers and hasten effective operation of the Act.

Boston, Mass.—Pier 48, Mystic Docks, Charlestown, with the only marine grain unloading apparatus in the port, has been unable to keep up with imports of Argentine corn. After waiting 17 days the British steamer Tower Crown, with 340,000 bus., was able to berth at the pier Mar. 4. At the same time the British freighter Oakdene, already held in the lower harbor with a similar cargo, for two weeks, anticipated waiting another 10 days before it could dock at the power unloaders. Five more steamers, booked for Boston with Argentine corn, were consequently ordered to other ports.

Legislation in California

Bills before the California legislature that affect the feed industry include the following:

S.B. 1033—Tickle. State hold title to all sardines taken, but release title to person when conformity with state regulations. State establishes maximum prices to all parties including consumers.

S.B. 1034—Tickle. Sets up California Sardine Processors Fair Competition Act. Prohibits sales below cost.

A.B. 774—Scudder. Unlawful to ship sardine meal out of state.

A.B. 1067 and **A.B. 1068**—Tenny. Unlawful to use any but sardine offal (or fish offal) respectively in a reduction plant.

S.B. 725—Tickle. Repeals sections requiring permits for reduction plants also limit on percentage of sardines that may be reduced.

Midwest Transit Rates

In No. 27,628 the Interstate Commerce Commission is hearing at Kansas City favorable and unfavorable testimony on provisions which permit interior points to transit grain on thru rates, while denying the same privileges to rate break points.

The St. Louis, Memphis, Omaha and St. Joseph grain exchanges are co-complainants with Kansas City's Board of Trade. On the supporting side, at least in part, are Peoria, Minneapolis, Duluth, Sioux City and Topeka markets. Opposed are the boards of trade of Chicago, Wichita, Hutchinson and Fort Worth, grain and milling interests of Texas, Oklahoma, southern and northern Kansas, and central and southwestern Missouri, and representatives of state commissions in Kansas, Oklahoma and North Dakota.

Among those testifying were:

Harold Merrill, vice-pres. Davis-Noland-Merrill Grain Co.: The rate break principle should be basic, but where rates via Kansas City are lower than the combination, transit privileges should be allowed at Kansas City. Grain can no longer be bought in the Omaha market and transited at Kansas City. Even the old basis, in effect prior to Aug. 1, 1931, was preferable.

W. C. Lathrop: If Kansas City were awarded transit on proportional rates from Omaha to St. Louis, Omaha would be accorded proportion rate transit privileges on Kansas City grain to Chicago, which would not help Kansas City.

Oscar T. Cook: The rate system no longer permits mills to purchase much wheat in Omaha, tho the wheat there is needed for the best milling mix.

Fred Lake: Interior elevators have so great an advantage in handling Pacific Northwest wheat that Kansas City is not even competitive.

Witnesses of the Kansas City Board of Trade concluded their testimony in little more than a week from the opening of the hearing on Mar. 3. Then began the hearing of witnesses from other markets. St. Joseph's principal witness, appearing Mar. 12, was C. D. Sturtevant, Bartlett Frazier Co., Chicago.

Ton Mile Tax for Trucks

Highway taxation based upon a ton-mile ratio would tend to equalize competition between rail and motor carriers, declared W. R. Scott, Executive Vice-President, Associated Southwest Country Elevators, before a joint meeting of the Lincoln (Neb.) Chamber of Commerce and the Central Western Shippers' Advisory Board.

"Legislation left untouched the so-called private carrier who is private because he is hauling his own goods. He is also described frequently as an itinerant trucker. He is both a merchant and a carrier, and he is itinerant in the sense that he has no fixed place of business and follows no fixed transportation route. He comes and goes as his opportunities for profit direct.

"In many states truck registration fees are outrageously low and should be increased to a reasonable level. In Missouri, for example, they are only \$10.50 per vehicle, while in the neighboring state of Iowa they are \$250 for a 5-ton truck.

"We hold to the view that the highways have been built primarily for private use, and that when they are utilized by peddlers for purposes of profit the measure of compensation should be based upon the use made of the highways. In other words, a tax upon a ton per-mile basis."

State Laws for Itinerant Merchant Truckers

By D. D. SIEGELMAN, EXECUTIVE SEC'Y, ASSOCIATED SOUTHWEST COUNTRY ELEVATORS

Some 88 other industries, suffering from the depredations of itinerant merchant truckers, banded together with the Associated Southwest Country Elevators, to create a model control bill and promote its passage in the legislatures of each of the eight states covered by the organization.

Unlike every other form of business the itinerant trucker pays no property or real estate taxes on his business, carries no insurance on buildings, stocks, or for workmen's compensation, suffers no bills for lights, phone or building repairs, contributes not to charity and civic enterprises. A small down payment, a second-hand truck, a small registration fee, his repairs, then, aside from gas taxes, he is as free as the air.

The bills offered in state legislatures to mitigate this evil are all more or less alike, and require nothing of the itinerant that is not required of the established merchant in some form. They provide for registration and licensing of itinerants by their home states, license fees averaging about \$100 per truck per year, proper identification tags, standard liability insurance, integrity bonds for \$1,000, tax bonds for \$500 (mostly to cover sales taxes), and use of load manifests. Other provisions give the state control bodies power to enforce the acts.

Missouri's HB 228, with 15 joint authors, went to com'te hearing Feb. 11, was favorably reported out on Feb. 24.

Kansas' SB 177 and HB 225 were concurrently introduced in both houses. On Feb. 23 the house com'te reported out its bill favorably. The situation is little less healthy in the senate.

Nebraska's unicameral legislature has received its LB 50 from its transportation com'te with a recommendation to pass.

Illinois introduced a bill Feb. 23. It has not yet been reported out of com'te and needs your support and influence.

In Oklahoma little progress has been made. Opposition developed which has kept a bill from being introduced.

In Texas HB 62 was introduced on Jan. 15, but opposition developed that held the bill at the bottom of the calendar until Feb. 18, when

it was reported out of com'te with a recommendation to pass.

Iowa introduced a bill last month in the Senate, but it has not yet been passed. Colorado's bill, introduced in January, is not yet thru the com'te hearing. Arkansas' SB 161 promises to be passed, and Minnesota and Washington are both working on bills prepared along the same lines.

Grain Carefully Handled by Distillers

The world's largest distillery at Peoria, Ill., uses only large kernel No. 1 corn, as free from damage as possible, contrary to the pre-prohibition practice of using low grade grain. The larger the kernel the greater the proportion of starch. Cracked or damaged kernels and the bacterial count go hand in hand. Distillers also want low moisture content corn, one of the lesser reasons being that the government penalizes them for producing too little alcohol per bushel of grain.

Little difference exists between the starch content of white and yellow corn. However, they use yellow corn exclusively.

All carloads of the choice Rosen or Rosen type rye used are kept on track twenty-four hours so that the bacterial culture may be taken, and if found too high the car is rejected. Bacteria resulting from foreign or damaged material in both corn and rye results in bitter and undesirable taste and a lack of uniformity in other factors that only could be eliminated in pre-war days by long time aging. This accounts for the six and twelve month whiskies on the market today being finished products—they are distilled under laboratory controlled conditions and with predetermined mashes so that they are ready for market in the period decided upon beforehand.

Grain is unloaded with an air system into their 90,000-bu. elevator—a complete vacuum being kept on the grain (whether whole or ground) every second. Making their own power, they can afford the 100-h.p. motors for unloading, one car an hour being their capacity.

The inside of the grain bins are covered with a bakelite finish and polished smooth. Above the bins are cleaners, magnetic separators, etc.

One of the very good reasons they have spent so much money in their extensive dust collecting equipment is that they have found that in every corner or cavity where grain or grain dust or mash may settle there will collect millions of microbe organisms, the greatest enemy to cleanliness. These microbe organism multiply to an infinite degree and must be killed. In a distillery as in a grain elevator, these microbe organisms are declared most dangerous and some renowned scientists are now advancing the thought it is these microbe organisms that generate dust explosions in elevators because of reaching their ignition point.

From the grain bins the grain runs thru three sets of grinders where it is gradually reduced to the fineness of meal desired. The meal is then re-elevated by air to hoppers in the top of the

elevator and measured off by Richardson Automatic Scales into the vats below. Malt and water are added to the meal to convert the starches into sugars and the mixture later run into fermenters where yeast is added for conversion of the sugars into alcohol.

At every step of the way a complete laboratory check is made and the production thereby controlled.

This plant might well be termed a push button industry, as almost everything is controlled down to the last degree with electricity. Elaborate panel boards with graphs and meters for every factor were visible in innumerable locations.

Particularly of interest were the grated floors which gives operators a complete view of the entire building and processes from any spot.

Use of automatic equipment in grinding some 21,000 bushels daily eliminates the human element and accomplishes uniformity. This amount of grain results in an astounding production.

A point of particular interest was the declaration that kiln-dried corn has a much lower bacterial count. In this connection it was stated that corn for distilleries should never be dried at a temperature in excess of 200 degrees nor should it be dried rapidly, as this affects the composition of the starch and the germ, and sometimes pops open the kernel so that bacteria have an opportunity to attack it.

The Hiram Walker plant recovers everything used 100% thru its closed system, the products being the liquors, dry ice and dried grains.

Flat House Converted Into Elevator

In the Pacific Northwest a limited number of flat warehouses have been converted to handle bulk grain, thus utilizing the investment in sack warehouses and providing bulk handling facilities at low cost.

Delivery of grain to the horizontal row of bins is accomplished by screw conveyors or by spouting. Earlier attempts at this type of construction were not wholly satisfactory. The concentration of great weight on a limited amount of floor space caused the floors to settle. This in turn caused shafting and conveyor systems to get out of line and bind, giving considerable trouble. Cribbing in the bins spread apart and grain leaks developed. Extensive repairs had to be made to the foundations to remedy these defects.

By properly reinforcing foundations with concrete, by mounting shafting and conveyor systems on independent foundations to permit settling of the floor without damage to them, and by tie-rodging and reinforcing bins, much more satisfactory results have been obtained in houses converted more recently.

For a safe margin of profit an elevator should handle annually a minimum of three times its capacity. The average investment per bushel of capacity was 8.21 cents for 46 sack warehouses, 28.87 for 40 wooden elevators, and 43.60 for 19 concrete elevators, as reported by the U. S. D. A.

Supply Trade

Ft. William, Ont.—Charles J. Duesing, for many years master mechanic for the Barnett-McQueen Const. Co., Ltd., died recently.

Chicago, Ill.—Eugene Arms, mgr. Mutual Fire Prevention Bureau, announces the removal of his offices to the Chicago Daily News Bldg., 400 W. Madison St.

Akron, O.—A general price advance of 10% on all lines of mechanical rubber goods manufactured by B. F. Goodrich Co. will become effective April 1.

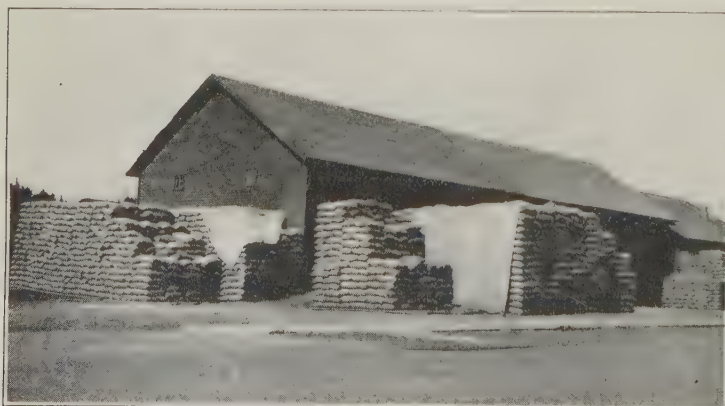
Muncy, Pa.—The Robinson Mfg. Co. was recently reorganized, electing the following officers: Thomas Wood, pres. and treas.; C. Roy Dimm, sec'y and J. A. Krimm, vice pres. in charge of sales.

Chicago, Ill.—The Prater Pulverizer Co. has ready for distribution a new catalog which describes and illustrates its feed grinding equipment. This catalog will prove of interest to any one who is operating or intends to operate feed grinding equipment. A copy will be sent to Journal readers who write the company requesting it.

Chicago, Ill.—B. I. Weller is distributing an attractive catalog which gives complete information relative to Calumet Cups and the Calumet Distributor. The book also contains information of value to those who are interested in increasing the capacity of their elevator legs. Readers of the Journal can secure a copy by writing Mr. Weller.

Minneapolis, Minn.—The 58th edition of the catalog published by R. R. Howell & Co. will soon be ready for distribution. The catalog is larger than ever before and contains over 300 pages of illustrations and descriptions of a complete line of equipment for country and terminal elevators, feed and flour mills. Every reader of the Journal should have a copy of this catalog in his file for ready reference.

Chicago, Ill.—A new Fairbanks-Morse bulletin (No. 1600) describes that company's line of polyphase woundrotor or slip-ring, ball-bearing, induction motors. The high starting torque and low starting current characteristics claimed for these wound-rotor motors should make them ideally suited to applications where the relatively high starting current of squirrel cage motors would be objectionable—in driving high-inertia, slow-starting loads, or where the size of motor required is relatively large with respect to the power supply. Slip-ring or wound-rotor motors can be operated at either constant or regulated varying speeds, a feature that qualifies them for certain types of service for which squirrel cage induction motors are not suited. With proper regulating control, the speed can be varied between half and normal with load connected.



Wheat Piled in Sacks after Warehouse at Pendleton, Ore., was Full.



Flat House Made into Elevator by Adding Leg and Spouting.

Grain and Feed Trade News

Reports of new firms, changes, deaths and failures; new elevators, feed mills, improvements, fires, casualties and accidents are solicited.

ARKANSAS

Pocahontas, Ark.—The Hogan Grist Mill burned in the afternoon of Feb. 18, all machinery and fixtures were lost; partly insured. Lina Hogan, owner, was slightly burned in trying to salvage some of his property. He plans to rebuild.

CALIFORNIA

Sacramento, Cal.—New members to the number of 82 have been admitted to the California Hay, Grain & Feed Dealers Ass'n during and since the last convention.

San Francisco, Cal.—The thirteenth annual convention of the California Hay, Grain & Feed Dealers Ass'n will be held in this city Apr. 22, 23 and 24, with headquarters at the Palace Hotel. E. R. Warren, of the Schuler O'Connell Grain Co., this city, is the general convention chairman. The various com'tes are working hard to give visiting members a good time.

San Francisco, Cal.—Fred P. DeHoff & Co. is a new grain and feed brokerage firm, opened in the Merchants Exchange Bldg. on Mar. 1, by Fred DeHoff, who has been with the F. E. Booth Co., producers of sardine oil, for many years. Before his connection with the latter company, Mr. DeHoff was with the Hart-Hill Grain Co. and the San Francisco Milling Co.

Sacramento, Cal.—Bills in the legislature include A. B. 2469 by Donnelly, giving a lien to all persons working in connection with bean threshing machines; S. B. 953 (Powers) amending the 3% Truck License Tax Act, and exempting farmers up to \$100 income for one month or total of \$300 for one year from hauling, and reducing license and renewals to \$12 from former \$25 first year and \$15 renewal; S. B. 1027 (Jespersen), providing that no retailer shall own or control any manufacturing or wholesale or producing source of articles sold by him to public, exempting co-operatives, prohibiting any feed mixer from selling at retail, owning any farm, interest in wholesale outlet, etc., and prohibiting any wholesale manufacturer, distributor, etc., from selling at retail; a new bill to be introduced (Senator Law and/or Assemblyman Walker) making it compulsory to buy grain in its original condition and containers on a gross weight basis, also prohibiting deduction of tare for bag and amending grain out of the present bag law.

CANADA

Tilsonburg, Ont.—Fire believed to have been caused by a gas stove in the office, on Mar. 10, destroyed John Rock & Sons' 50-barrel flour mill at this point.

Medicine Hat, Alta.—The Alberta Linseed Oil Co. recently announced the purchase of enough flax to keep its plant operating eight months continuously. The company has received an order from Minneapolis for 800 tons of linseed meal.

Vancouver, B. C.—The lowest tender for alterations and additions to Port of Vancouver Elevator 3 (reported in the Journals last number to be made soon) was submitted by the Carter-Halls-Aldinger Co., Ltd., it is reported, and confirmation of the award of the contract is awaited from Ottawa. The tender was the lowest of four submitted.

Ft. William, Ont.—Managers and terminal elevator superintendents of Ft. William and Port Arthur are already making plans for the eighth annual convention of the Society of Grain Elevator Superintendents of North America, to be held in this city, the dates for which have been definitely set at June 14 to 16. S. S. Orstad, manager of Federal Grain and North Land Elevator companies, is the general program chairman. That no stone will be left unturned to insure 100% success of the convention is the unanimous determination of the local grain elevator men.

COLORADO

Berthoud, Colo.—A new 125-h.p. motor has been installed at the Farmers Flour Mills here.

ILLINOIS

Trenton, Ill.—The Trenton Milling Co. recently suffered wind damage.

Illioopolis, Ill.—We have purchased a new seed corn grader for use in our seed corn business.—Illioopolis Grain Co.

Vermilion Grove, Ill.—A new hammer mill has been added to the equipment of the Farmers Grain & Feed Co. here.

Le Roy, Ill.—The Hasenwinkle-Scholer Grain Co. is installing a new 20-ton heavy duty Soweigh Motor Truck Scale.

Wyoming, Ill.—E. M. Etherton, formerly of Pekin, Ill., is the proprietor of the Wyoming Milling Co., which he opened here on Feb. 8.

Mindale (Minier p. o.), Ill.—Melvin Hallstein has been engaged as manager of the Mindale Grain Co.'s elevator, succeeding Asa Nafziger.

Mineral, Ill.—A. L. Stonewall has resigned his position with F. C. Dewey & Co., elevator operators, and has been succeeded by Virgil Croegaert.

Kempton, Ill.—We have installed a Richardson Automatic Scale in our elevator, replacing an old scale that has been in use for 33 years.—Kempton Co-op. Co.

East St. Louis, Ill.—Union demand for a closed shop caused a strike at the local feed plant of the Allied Mills, Inc., which was consequently closed the second week of March.

San Jose, Ill.—John Fryer, who has been in the grain business here for the past 48 years, is retiring from active business and has sold his elevator to the San Jose Co-op. Co.

Roanoke, Ill.—The Farmers Elevator Co. has improved its elevator equipment by the recent installation of a new truck dump. A lumber shed and a coal shed were also erected.

Greenwich (Kankakee p. o.), Ill.—The elevator of the Laird Grain Co. has been improved recently by the installation of a 20-ton Soweigh Dump Scale with a 10x34-foot platform.

Bushnell, Ill.—Arthur Kukuk has sold his grain elevator, formerly known as the Simonson Elevator, to a group of men from St. Louis. Mr. McClintic, of St. Louis, will be manager.

Assumption, Ill.—A. L. Moore, a prominent resident of this town and who was connected with the Assumption elevator for many years, died at his home here on Feb. 26, at the age of 74 years.

Peoria, Ill.—W. C. Engel, vice-pres. of the Farmers National Grain Corp., was reported to have announced early this month that the Burlington Elevator here would be closed Mar. 15 because of light receipts.

Forreston, Ill.—We intend to put in a truck scale this spring. This company started business Aug. 1, 1936, buying out the Harper Grain Co., and is enjoying a nice business.—Harper Elevator Co., E. J. Drake, mgr.

Hazelhurst, Ill.—Guy Meyers, former Milledgeville, Ill., postmaster, has purchased the elevator here owned by M. O'Kane, the latter continuing as a partner in the business for the coming year. Mr. O'Kane bot the elevator 29 years ago from his uncle, Alex O'Kane.

New Lenox, Ill.—P. C. Allen, the new manager of the Farmers Elevator Co.'s elevator at this point, is reported as slowly but surely recovering from two major operations recently performed in a Chicago hospital.

Ottawa, Ill.—L. L. Seago, manager of the Grand Ridge Co-op. Grain & Supply Co.'s elevator at Grand Ridge, Ill., will take over the management of the Norris Grain Co.'s new river elevator Apr. 15.

Bentley, Ill.—Our place has been visited by thieves, who got away with about 8 bus. of clover seed, 25 bus. of seed corn, an adding machine, some motor oil and some gasoline. This occurred about 2:30 a. m. of Mar. 18.—Bentley Farmers Elevator Co., Geo. A. Fecht, mgr.

Kasbeer, Ill.—The Kasbeer Farmers Elevator Co. closed its year on Mar. 1 with the following results: Sales of grain 370,748 bus., feeds and merchandise \$40,101, grinding fees collected \$1,683, gross gain \$12,132, expenses \$7,148, operating gain \$4,983. The company paid 8% on stock.

Danvers, Ill.—The Danvers Farmers Elevator Co. is now doing business in a handsome new concrete elevator completed late last fall, and fitted with every modern contrivance for handling grain. Further improvements which will be made to complete the job is building of concrete coal bins and a new office building.

Montezuma, Ill.—Theodore F. McEvers, 63 years of age, who for 40 years operated a grain elevator here, died at his home in this city Mar. 8, following an illness of two weeks, tho he had been in failing health for several years. Mr. McEvers took an active part in public life for many years, having held the office of supervisor in Montezuma township for a long period.

Kemp, Ill.—R. E. Williams retired from the firm of T. E. Hamman & Co. on Mar. 1 and as manager of the Kemp elevator. Carter Hayes, a merchant here, is taking his place, altho not taking an interest in the firm at this time. Several months ago T. E. Hamman gave his sons, Paul and Thiers, an interest in the two elevators at Filson and at Kemp. Mr. Williams recently purchased nearly a section of land and will devote his time to it. An electric line is being built and motors will shortly be installed.

Champaign, Ill.—Actual work on the construction of Swift & Co.'s \$250,000 soybean processing plant was expected to get under way last week, following a brief ground-breaking ceremony by a group of Swift Co. officials, leaders of the Chamber of Commerce and representatives of the Illinois Grain Dealers Ass'n on Mar. 12. As reported in the Feb. 10 Journals, the James Stewart Corp. has the contract for construction of the plant, which will include a concrete elevator of approximately 400,000 bus. capacity, the plant to be completed in time for the new crop of soybeans this summer.

Lanesville, Ill.—A group of Missouri grain buyers had been purchasing grain by the carload from central Illinois elevators and farmers for several months, giving checks in payment, and until recently the checks had been good, but a few weeks ago the checks began coming back. H. C. Roberts, who operates a grain elevator here, received a bogus check for \$430; the Mansfield-Ford Grain Co., of Lanesville, took a check for \$71; the McCann Grain Co., of Buffalo, Ill., received one for \$344.74. One of the Missouri men has been arrested and at last reports another was being sought.

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Piper City, Ill.—The old Montelius Elevator is being taken down. The building has not been used for a number of years and was considered unsafe.

CHICAGO NOTES

A. D. Burhans, of Lombard, Ill., a well known breeder of sporting spaniels, has been added to the staff of Vitality Mills, Inc., feed manufacturers.

By a vote of 327 to 23 the members of the Board of Trade on Mar. 22 changed the date of the annual election to the first Monday after the 7th day of January.

New members of the Board of Trade are: Albert C. Fischer, Henry C. Graff, of New York City; Charles Felix Kronheimer, commission merchant of Le Havre, France.

Siebel C. Harris, as guest speaker at a Chicago Ass'n of Commerce luncheon, gave an instructive outline of the functions of the Board of Trade and its activities that operate to reduce the cost of handling grain.

Timothy J. Kiley, a member of the Board of Trade from 1914 till 1933, when he left to become chief grain inspector for the state of Illinois, was welcomed back to the trading floor as a member again on Mar. 11, and was presented with a bouquet of flowers.

Three changes in the rules of the Board of Trade were adopted by vote of members Mar. 22, regarding the action to be taken on failure to pay assessments, changing the rule on transfer of membership, and imposing a fee on transfer of membership of 5% but not less than \$250 nor over \$500.

Alonzo J. Cutler, of LaGrange, Ill., one of the oldest members of the Chicago Board of Trade, died Mar. 8, at the Hinsdale Sanitarium, after a short illness, aged 85 years. He had resided in Chicago and its suburbs since 1869. Mr. Cutler was the youngest man ever admitted to membership in the Board of Trade when he was granted trading rights in 1881. Three years later he established his own firm, retiring from active business in 1934.

An amended plan for reorganization of the Rosenbaum Grain Corp. and its subsidiary the Chesapeake Export Co. was presented to Judge Holly Mar. 22 by Lowell Hoyt, Herbert Levy and Murry Nelson, representing the creditors' committee, and creditors and stockholders were given until Apr. 21 to file objections. Assets of the Rosenbaum Grain Corp. would be turned over to the Rosenbaum Chesapeake Trust, a common law trust, which would distribute the proceeds of their liquidation to the trust certificate holders. Appointment of three trustees by the court is provided. Creditors of the company whose claims are entitled to priority by operation of the bankruptcy act would be paid in full in cash, according to the proposal. Secured creditors would retain their collateral to the extent it satisfies their claims and also participate as unsecured creditors for any balance due. Unsecured creditors of the company would receive for pro rata distribution participation certificates representing 92½% of the net assets, after the payment of administrative expenses and prior claims. Holders of the parent company's first preferred stock would receive as a class participation certificates representing 6% of the net assets. The class A common stock would receive for pro rata distribution participation certificates representing 1% of the net assets and holders of the class B stock certificates representing one-half of 1% of the net assets.

Board of Trade memberships are selling at \$5,600 net to buyer, an advance of \$300 over previous sale.

E. A. Siebel, of E. A. Siebel & Co., technical advisors for various brewing interests, have bot a 496-acre estate, just east of Lake Villa, Ill., to be used as an experimental farm for growing various grains used in making beer and other malt drinks.

INDIANA

Ligonier, Ind.—A feed mill has been opened here by Chris Moser.

Jonesville, Ind.—The Columbus Elevator Co. has just installed new 15-ton scales at its elevator.

Marion, Ind.—The Hoosier Soybean Mills recently installed a Sidney Grain Mch. Co. Special Mixer.

Sidney, Ind.—Ward Crist and his father, A. L. Crist, of South Whitley, are installing a new feed mill here.

Kempton, Ind.—The elevator building of A. B. Cohee was slightly damaged by fire of unknown origin on Feb. 11.

Brookston, Ind.—W. C. Halstead, one of the owners of the Brookston Grain Corp., died suddenly from a heart attack on Feb. 26.

Nulltown (r. d. Connersville), Ind.—The Uhl-Snyder Milling Co. has completed remodeling and painting its 75,000-bu. elevator here.

La Paz, Ind.—La Paz Grain Co. was the recent purchaser of a 1½-ton Kwik-Mix Mixer, manufactured by the Sidney Grain Mch. Co.

Medora, Ind.—An attempt to put a belt on a fast-moving pulley resulted in the death of a workman at the Bundy Bros. corn mill recently.

Greencastle, Ind.—The South Side Elevator, owned by the Miller Grain Co., has been sold to Orville J. Modisette, who formerly owned and operated a flour mill at Greenville, Ind.

Boonville, Ind.—W. H. Bradley, who for many years managed the Elkhorn Mills here, is now assistant manager of the Boonville Mills, owned and managed by Otto C. G. Roller.—W.B.C.

New Albany, Ind.—John McDonald's fine concrete elevator was not badly damaged by the flood waters of the Ohio River, but it carries a high water mark, 27 feet above its foundation.

Shelbyville, Ind.—The Shelby County Farm Bureau Co-op. Ass'n is installing a motor-driven Blue Streak Corn Cutter and Grader. The ass'n operates two elevators and a 100-barrel mill at this point.

Fremont, Ind.—An elevator here is reported to have been bot by Ellsworth Bingham and Oscar Fisher, formerly employed at the Edon Farmers Co-op. Co.'s elevator at Edon, O., and they will operate it.

Shelbyville, Ind.—The many friends of H. W. Reimann sympathize with him in the recent death of his wife, which occurred Feb. 26. Mr. Reimann is a former president of the Indiana Grain Dealers Ass'n.

Warren, Ind.—We have recently installed a new corn sheller, having a capacity of 400 to 600 bu. per hour, and are planning on purchasing a coal unloader.—Warren Elevator Co., Roy L. Mossburg, treas.

Mishawaka, Ind.—The Mishawaka Grain & Coal Co. is installing a type "B" McMillin Truck and Wagon Dump in its double driveway. Having had a large truck scale for some time, this will complete its equipment.

Decatur, Ind.—A beautifully wooded piece of land, containing 74 acres, in the southeastern end of Ft. Wayne, has been given to that city for a park by D. W. McMillen, pres. of the McMillen Feed Mills, Inc., of Decatur.

Oakland City, Ind.—The Oakland Supply Co., handling a complete stock of feeds, millfeeds, bulk garden seeds, flour, fertilizer, and poultry equipment, has been opened in the Hubbard building by a nephew of Mr. Hubbard.—W.B.C.

Hamlet, Ind.—The Hamlet Grain & Feed Co. has given a contract to the Sidney Grain Mch. Co. for the erection of a new elevator, replacing its fire loss of last November. The feed mill has already been rebuilt, as reported in the Jan. 13 Journals.

Hammond, Ind.—While in Chicago recently, Maxwell M. Nowak, head of the Nowak Milling Corp. here, was injured in an automobile accident. He has been moved from the hospital to his home, where he is making satisfactory recovery.

Herbst, Ind.—The Herbst Grain Co. will install a type "B" McMillin Truck Dump with single-phase motor. The company is operating its elevator with a large truck motor, shelling corn and operating otherwise very satisfactorily and more economically than with any other power.

Frankfort, Ind.—The elevator of the Sims Milling Co., Inc., was discovered to be on fire at about 4 a. m., Mar. 5, but quick action by the fire department prevented what might have been destruction of the entire plant. Several motors were damaged and the interior of the top of the elevator was charred.

Scottsburg, Ind.—Herman Everitt, manager of the Ebert Grain Co.'s elevator, and his wife were hosts at a dinner held at the Commercial Hotel, the evening of Mar. 3, for the employees of the company and a number of feed dealers in surrounding towns, the dinner being in celebration of the 50th anniversary of the founding of the company by E. C. Eberts, who died last year. The Eberts Grain Co. has retained the members of its old organization since the death of its founder and has successfully continued the business.

Indianapolis, Ind.—Some of the laws enacted at the recent session of the state legislature and signed by the governor that are of interest to grain dealers are as follows: H. B. 44, requiring licensing and bonding of persons and firms in the business of soliciting accounts for collectors, or collecting accounts, which bill should place a permanent check on fakirs soliciting collection of slow accounts. H. B. 111 prescribes minimum crews for varied types of railway trains. Shippers will pay increased freight. H. B. 169 extends to occupational diseases, as well as injury, benefits of the Workmen's Compensation Law. H. B. 227 amends gross income tax law, increases exemptions for retailers from \$1,000 to \$3,000; effective Apr. 1, 1937. H. B. 233, safety bill, amending law to provide mandatory reporting of accidents. H. B. 446 permits state chemist to exchange used tags for new tags used in connection with feedingstuffs. S. B. 23, Fair Trade Bill, prohibiting merchants from selling trade-marked commodities at price lower than specified by the producer. Bills enacted but not signed yet are as follows: S. B. 203, extending from thirty to ninety days the period the employer is required to furnish medical treatment for an injured employe (comes under compensation). S. B. 251, making it mandatory for establishment of county agricultural agents in all counties, appointments to be made by Purdue University, state to pay \$2,000, county not less than \$1,000 to cover salary, office help and expense of county agent.

IOWA

Hartley, Ia.—We intend to put in a steel boot pan.—Mann & Mann.

Nodaway, Ia.—H. G. Everett has purchased the elevator at this station. He formerly operated it under lease.

Imogene, Ia.—The elevator here, Louis Fossen manager, has been remodeled, the Van Ness Const. Co. doing the work.

Davenport, Ia.—The fire in a leg of the Victoria Elevator March 20 was quickly extinguished without much damage to the house.

Ft. Dodge, Ia.—The Plymouth Processing Mills, soybean processing plant, have just opened a mixed feed department, supervised by John Scott, former Iowa State College chemist. Mixed feeds for cattle, hogs, sheep and poultry will be manufactured, and sales will be both wholesale and retail.

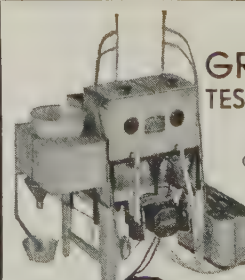
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Rowan, Ia.—The Rowan Lbr. & Grain Co. has given the contract to the T. E. Ibberson Co. for the construction of a 35,000-bu. elevator, frame, covered with sheetiron, work to start at once.

Sumner, Ia.—H. J. Schultz, elevator owner and operator, has bot a frame building on the Great Western branch line tracks, which will be used for additional storage space for feeds.

Cedar Rapids, Ia.—The Western Grain & Feed Dealers Ass'n will hold its annual convention in this city, Apr. 13 and 14, Hotel Roosevelt being headquarters. D. O. Milligan, Hubbell Bldg., Des Moines, Ia., is sec'y of the ass'n.

Ft. Dodge, Ia.—Headquarters of the Iowa Co-op. Co. (affiliated with the Farmers National Grain Corp.) have been moved from Humboldt to Ft. Dodge, and H. W. Cramer, for many years manager of the Community Co-op. Ass'n, Webster City, Ia., has been appointed manager, succeeding George Beals, who resigned in December.

Webster City, Ia.—H. W. Cramer, who has been manager of the Community Co-op. Ass'n (formerly the Farmers Grain Co.) since it was organized in 1927, has resigned and taken a position as manager of the Iowa Co-op. Grain Co., Ft. Dodge. John Berogan, manager of an elevator at Highview (Webster City p. o.), has been named Mr. Cramer's successor.

Whitten, Ia.—We built a new outside double corn crib last October, equipped with Meyer Cup Elevator and Bender Hoist. The building is 32 feet long and 28 feet wide, with 14-foot posts, and was constructed by the T. E. Ibberson Co. Have handled nearly 20,000 bu. thru the building since it was completed.—G. D. Mabie Grain Co., by L. L. Hauser, mgr.

Postville, Ia.—Hal Roberts Son feed mill burned at 6:30 p. m., Mar. 10, half an hour after employes had left for the day, together with a large quantity of feed and many hides. Loss estimated at \$4,000. The structure was a two-story frame building, formerly serving the Milwaukee Railroad as a station. It had been used by Mr. Roberts for several years as a combination feed and molasses mill.

KANSAS

Solomon, Kan.—J. W. Neil, Solomon Grain Co., sustained wind damage on Feb. 16.

Clay Center, Kan.—I sold my elevator to the Clay Center Grain Co.—J. W. Pinkerton.

Wichita, Kan.—The Wallingford Grain Corp. is now turning out feeds at its new \$25,000 feed mill.

Grinnell, Kan.—The Shellabarger Elvtr. Co. has appointed Hobart Haney manager of its local elevator.

Wichita, Kan.—Electrical breakdown damage occurred in Mill Plant "B" of the Kansas Milling Co. on Mar. 5.

Macksville, Kan.—I plan to buy or build a small grain elevator, with a capacity of 15,000 to 30,000 bu. or better.—William T. English.

Great Bend, Kan.—A 200-h.p. synchronous motor, direct connected to the line shaft, is being installed at the plant of the Barton County Flour Mills Co.

Smith Center, Kan.—Contract for the new elevator and feed mill, described in the Mar. 10 Journals, has been let by the Smith Center Co-op. Mill & Elvtr. Co. to the VanNess Const. Co., which has started the work.

Peabody, Kan.—D. W. Sterling, manager of the Peabody Equity Exchange elevator for several years, resigned Mar. 1 and has been succeeded by W. R. Atherton, of Hutchinson, who has managed elevators at Turon and at Sterling, Kan.

Coffeyville, Kan.—The Cheerio Milling Co. has been installing machinery in a building purchased several months ago, which will be used for the manufacture of poultry feeds, the dairy feeds mixing being continued in the present location. The two locations will be connected by an enclosed runway.

Belmont, Kan.—We will remodel our elevator.—Moore Grain Co.

Menoken, Kan.—We are installing a larger sheller and automatic controlled motor at our Menoken plant, and new truck scales at the Grove, Kan., plant.—Merillat Bros.

Madison, Kan.—Among the suggestions received by a local newspaper for this town's betterment was one from a farmer who said: "Madison is in need of a good elevator so that farmers may buy grain in Madison and not have to go out of town."

HUTCHINSON LETTER

But little damage resulted from a recent dust fire at the Western Terminal Elvtr. here. The fire was put out before the fire department could reach it.

A grain office has been opened in the Hutchinson Board of Trade Bldg. by Charles Colby, formerly associated with Ralph Russell in the Russell Grain Co., which partnership was dissolved recently as reported in the Jan. 13 Journals.

While W. T. Macauley, sec'y of the Hutchinson Board of Trade, has been tending a rate hearing in Kansas City, Charles Colby has been pinch-hitting for him. It was like "old times" to Mr. Colby, for he is a past-sec'y of the board.

The Salina Terminal Elvtr. Co. sustained damage to its electrical equipment on Mar. 1. The Western Terminal Elvtr. Co. sustained similar damage on Mar. 5. The William Kelly Milling Co. sustained electrical breakdown loss in its Mill "A" on Mar. 5.

KENTUCKY

Russell Springs, Ky.—J. A. Williams has installed a corn mill in the Selby Bldg.

MARYLAND

Baltimore, Md.—Alfred A. Clark, of Thomas & Clark, grain merchants of this city, died at Johns Hopkins Hospital, Feb. 9, following an illness of four weeks.

MICHIGAN

Coldwater, Mich.—Davis Coal & Feed Co. has installed a one-ton Kwik-Mix Mixer, bot of the Sidney Grain Mchy. Co.

Dundee, Mich.—Karner Bros. installed a 200-bu. Randolph Direct Heat Grain Drier and are now operating on corn. This drier is equipped with an oil burner.

Birch Run, Mich.—Charles Wolohan, Inc., has added to the equipment of its local elevator a Sidney Corn Sheller, and at its plant at Merrill, Mich., a Sidney Combined Sheller and Cleaner.

Olivet, Mich.—The elevator here has been bot by Jack Stroo, of Grand Rapids, and business will be continued under the name of the Farmers Grain & Fuel Co., C. H. Roberts remaining under the new management.

Clarksville, Mich.—The Clarksville Co-op. Elvtr. has been purchased by J. Roy Smith, Caledonia business man and farmer. N. W. Stuart, manager of the elevator, and other employes will remain with the new owner.

Conklin, Mich.—Fred Taylor, of Muskegon, has purchased the Conklin elevator, the purchase being made thru the receiver for the Conklin State Bank. Mr. Taylor, who is moving his family to this point, will operate a grain and feed business.

MINNESOTA

Rushford, Minn.—John Oehler has sold his mill to Ralph Baerman.

Sherburn, Minn.—Mrs. Grimm has sold the Grimm Feed Mill here to Louis Schief, of Welcome, Minn.

Springfield, Minn.—T. E. Hier & Son have added to their equipment a large cleaner, sold by R. R. Howell & Co.

Holland, Minn.—The Monarch Elvtr. Co. has completed an addition, 32x40 feet, to be used for the storage of ground feeds.

Barrett, Minn.—The mill plant of G. H. Gustafson was totally destroyed by fire of undetermined origin on Mar. 8; loss estimated at \$25,000.

Madison, Minn.—A new feed mixing mill has been installed by the Madison Milling Co.

Brownsdale, Minn.—The Seeman Grain & Coal Co. is equipping its elevator with a new magnetic separator and a Howell Electric Overhead Truck Lift.

Whalan, Minn.—Local business men have purchased a feed mill which is installed in the building formerly used for feed grinding. It will be in operation soon.

Montevideo, Minn.—J. H. Lee, 71 years of age, well known grain dealer of this community, died at his home here Feb. 26, death being caused by a brain tumor.

Kerkhoven, Minn.—Contract has been given by the Kerkhoven Farmers Elvtr. Co. for the immediate construction of a 40,000-bu. frame and sheetiron, elevator to the T. E. Ibberson Co.

Roseau, Minn.—A storage annex, 30x32 feet, having a capacity of 34,000 bu., will be erected for the Farmers Co-op. Elvtr. Co. of Roseau, by the Hogenson Const. Co. June 1 is the date set for completion.

Porter, Minn.—C. W. Krogstad, of Tracy, who has been manager of the Farmers Co-op. Elvtr. Co.'s elevator there, is reported to have bot the controlling interest in the Porter Farmers Grain Co. and will take over the management of the business.

La Salle, Minn.—The plant of the Farmers Grain Co. is being given a general overhauling. A new high-speed, electrically-driven leg fitted with belt and Calumet Cups is being installed, and other improvements and alterations are being made. All machinery was supplied by R. R. Howell & Co.

Shakopee, Minn.—Tom McElligot, manager of Cereal Products Co.'s new malt plant and grain elevator here, will be host to at least half a hundred Minneapolis elevator superintendents for an extensive inspection tour on the afternoon of Mar. 30. The trip, designed to stimulate new operative and maintenance ideas, will be followed by instructive talks by plant technicians on pertinent barley topics. The Minneapolis superintendents have chartered a bus for this forty-mile trip, and plan a country-style (help yourself) chicken dinner at the local hotel after the inspection tour and barley discussions, followed by a business meeting. V. L. Champlin, general superintendent for Archer-Daniels-Midland Co., is pres. of the chapter and E. J. Raether, superintendent of the Belco Elvtr., Brooks Elvtr. Co., is sec'y.

DULUTH LETTER

After a two-months' lay-off eleven of the local weighers and samplers of the Minnesota state grain inspection department were returned to work Mar. 16. J. E. Paulsen, chief deputy here, said the department has adopted a rotation system, in which the eleven men will work for 30 days, replacing eleven men laid off. This schedule will continue alternately every 30 days until summer.—F.G.C.

Mills are showing a little more interest in their quest for cash wheat. They want desirable grades but are willing to take most anything offered within the prevailing price limits. The arrival of choice cars of durum resulted in their being snapped up by a mill buyer at fancy premiums. A car sold \$2.10½ at a 63-cent premium over the May contract. Other cars sold at premiums of 3 to 5 cents less.—F.G.C.

Ice in the harbor is quite thick and extends out into the lake four or five miles but with warm weather and rain would probably clear up quickly. The opening of navigation is still uncertain, and from all signs, several weeks away. Transit companies have announced the restoration of canal and lake service and that transportation lines handling freight jointly with the package lines will accept shipments to be held for transportation to eastern and western lake ports awaiting the sailing of first boat sailings in the 1937 season.—F.G.C.

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Employees of the feed plant of the Bob White Mills, Inc., went on strike recently, closing the mill for a day or two before the men and management reached an agreement. The men sought recognition of the flour, feed and cereal workers union and higher wages. Demands were quickly adjusted, the men returned to work and mill operations resumed.—F.G.C.

MINNEAPOLIS LETTER

The Northern Oats Co. has added a Howell Mill Type Corn Shearer to its plant equipment.

The Rodney Milling Co., Kansas City, Mo., and the Shenandoah Milling Co., Shenandoah, Va., have bot the equipment of the Paramount Mill here, which has been closed for several years.

Howard W. Commons, one of the oldest members of the Minneapolis Chamber of Commerce, died early this month at Pasadena, Cal., where he had gone for a vacation. He was 76 years of age.

The Frank A. Pierce Co., of this city, an old screenings firm, has been liquidated and its business closed. E. J. Pierce, son of the founder of the company, is entering the stock and bond business but still remains a member of the local Chamber of Commerce and of the Duluth Board of Trade.

MISSOURI

Wakenda, Mo.—The Ray-Carroll Grain Growers, Inc., have decided to rebuild the elevator recently destroyed by fire, work to start late this month.

Grand Pass, Mo.—Edwin E. Fenner, associated with the grain elevator here for a number of years, also a director of the Bank of Grand Pass, died in the Research Hospital, Kansas City, Mar. 1, death being due to cancer.

Nevada, Mo.—J. K. Hill has sold his elevator and feed and seed business to Jackson & Son, of Cherryvale, Kan., who operate a similar business in that city. The local elevator was built ten years ago by Mr. Hill, who has operated it ever since.

Pleasant Hill, Mo.—The Moundridge Milling Co. has given a contract to Chalmers & Borton to remodel and enlarge its plant here, increasing the capacity of its elevator from 50,000 bus. to 75,000 bus. and speeding up its handling capacity to three times its present capacity.

Lathrop, Mo.—H. L. Rogers, who at one time operated an elevator and mill at this point, died in Kingston, where he and his wife had resided with a daughter recently, on Feb. 23, at the age of 84 years. Pneumonia, following the flu, was the cause of death. Burial was at Lathrop.

St. Louis, Mo.—The grain futures com'te has postponed resumption of trading in grain futures on the St. Louis market, which was to have started on Mar. 15 on account of a proposed change in rules covering deliveries on future contracts which if made would necessitate trading in old and new contracts.

Jefferson City, Mo.—House Bill No. 228, which seeks to regulate the itinerant trucker, has been recommended favorably to the House by the com'te. Grain dealers who are interested in saving their businesses from this unfair competition should get in touch with their representatives and urge them to vote for this bill.

Jefferson City, Mo.—A bill has been introduced into the Missouri House (H.B. 419, by Representative Summers) which would require all manufacturers, wholesalers or jobbers of food products to carry liability insurance for the protection of consumers who make claims for personal injuries because of consumption of food products.

KANSAS CITY LETTER

Applicants for membership in the Kansas City Board of Trade include Henry G. Graff, of New York City, on transfer from F. G. Coe, deceased.

Robert O. Schurke has become associated with his father, O. E. Schurke, in the feedstuffs and flour brokerage firm of the O. E. Schurke Brokerage Co., which is said to be the largest hominy feed handler in the Southwest.

Kansas City, Kan.—The city commission early this month issued a work order to the Nicholson Co. to begin installation of machinery and equipment in the 3,000,000-bu. elevator, under construction on the public levee here, on or after Mar. 8.

Stanley Russell, well known in the feed trade, has connected with the L. C. Worth Commission Co., of this city, and has charge of the merchandising of millfeeds, molasses and other feed ingredients. Mr. Russell was formerly manager of the millfeed department of the E. H. Sullivan Grain Co., previous to which he was associated with the Dreyer Commission Co.

The Cereal Byproducts Co. opened an office in this city on Mar. 15 in the Board of Trade Bldg., with J. T. Sexton as manager. Mr. Sexton recently resigned from his position as manager of the feed division of the Seavey & Flarsheim Brokerage Co., in which position he has been succeeded by Homer B. Watson, recently assistant manager of the Kansas City purchasing division of the Missouri Farmers Ass'n, Inc. Mr. Watson has also been with Arcady Farms Milling Co. and the Grain Belt Mills.

MONTANA

Billings, Mont.—A \$25,000 feed manufacturing plant is to be erected this spring by the Occident Elvtr. Co. just north of its present buildings. The plant, which will manufacture dairy, poultry and range feeds, will consist of an elevator, a mill and a warehouse. The Occident Co. has been making feeds for some time and it is hoped the new plant will increase its capacity of output by 400%. Ernest C. Janke is superintendent of the Occident Co.'s elevators.

NEBRASKA

Humboldt, Neb.—The O. A. Cooper Co., elevator and mill operators, recently sustained damage by wind.

Palmyra, Neb.—The Farmers Co-op. Elvtr Co.'s gas and oil station here was badly damaged by fire Mar. 1.

Weston, Neb.—The east elevator of the Farmers Elvtr. Co. was recently sold and is being taken down. It was an old landmark here.

Verdon, Neb.—A new dump is being put in at the Verdon Elvtr., repairs made and the house thoroughly overhauled in preparation for the coming harvest.

Minden, Neb.—The Nebraska-Iowa Grain Co. has improved its equipment by the installation of a new elevator leg and a new head drive. Eck Olson did the work.

Diller, Neb.—The Farmers Grain Co. has leased its elevator to Black Bros. of Beatrice. For the three past years this house has been leased to the Russell Grain Co.

Harvard, Neb.—Fred Hoffman, manager of the Farmers Union Elvtr. Co.'s plant since 1923, has retired, and Harold Yost, who has been second man for the past six years, was named manager succeeding him. Vernon Wendt is now second man.

Elm Creek, Neb.—The Western Alfalfa Meal Co., incorporated; capital stock, \$50,000; incorporators: Andy Darrah, B. W. Hilgard, Earl Bliss, H. L. Mapes, W. C. Rishel; to do a general farming, orchard and alfalfa meal manufacturing business.

Omaha, Neb.—The Miller Cereal Mills was shut down by a sitdown strike begun by 150 men on the night shift, Mar. 15. The strikers demanded 10 cents per hour pay increase for day workers, 15 cents per hour for night workers, a 40-hour week and one week's vacation.

Friend, Neb.—The Acme Mill & Elvtr. Co. has leased its mill to Black Bros., of Beatrice, Neb., whose mill at that point burned last month. Roy Stepanek, part owner and manager of the Acme Co., will retain full control of his feed mill and the elevator, and will deliver wheat to Black Bros., who will maintain a payroll of about 20 men at the local mill, which will run on a 24-hour, seven-day basis.

Valentine, Neb.—Mr. Vanderheiden, for several years proprietor of the Valentine Mills, has purchased the mill property of the former Farmers Union Co-op. Ass'n (which went bankrupt several years ago), the elevator property of which he bot several months ago. The mill building (a landmark for over 30 years) will be wrecked and the material used in enlarging the elevator. Mr. Vanderheiden also plans to install a modern commercial feed mixing plant.

NEW JERSEY

Hackettstown, N. J.—The recent fire loss to the Beaty Feed & Flour Mills, at first reported at \$25,000, was later estimated to be nearer \$50,000; partly covered by insurance. Nearly 25 carloads of dairy feed stored in the building was destroyed, also all of the feed manufacturing machinery. Farm machinery, which Mr. Beaty sold, was stored in a building of fire-proof construction across the street from the mill and was not damaged. Business will be continued and the mill rebuilt as soon as possible.

NEW MEXICO

Portales, N. M.—Worley Bros. have their new feed mill in operation in the addition to the plant recently completed, the new structure being 32x60 feet, and the mill having a grinding capacity of 50 tons per day. The grinder is located in the basement and is operated by a 60-h.p. electric motor. Installation of the machinery for the making of flour and cornmeal is about completed. The business is operated under the name of the Portales Milling Co.

NEW YORK

Buffalo, N. Y.—The feed department of the Manhattan Flour & Grain Co. is being enlarged and new equipment installed.

Little Falls, N. Y.—The Checkerboard Feed Store has been opened in this city by the Ralston-Purina Co., which a short time ago leased the local freight house from the West Shore Railroad to be used as a distributing point for the Ralston-Purina products in this part of the state.

Geneva, N. Y.—We are building a 100,000-bu. re-inforced concrete grain elevator, Chalmers & Borton having the contract. New scales and cleaning machinery will be installed. Also to be built is a flour and feed warehouse having 9,000 square feet.—Finger Lakes & Hudson Flour Mills, Inc.

New York, N. Y.—New Produce Exchange members include the following: Irving Block, Edward P. Field, John L. Goodbody, Albert P. Heineman, Joseph A. Hook, John A. Johansen and Albert J. Schmidt. Elected to associate membership were: Henry B. Campbell and Sartell Prentice.

RANDOLPH GRAIN DRIERS

ASK THE MAN WHO HAS ONE
THAT'S ALL
WRITE FOR CATALOGUE

O. W. RANDOLPH COMPANY

3917-21 IMLAY ST., TOLEDO, O., U. S. A.

Buffalo, N. Y.—A feed jobbing and brokerage business has been opened by Sheldon Lattin in the Chamber of Commerce Bldg. He will operate under his own name.

Binghamton, N. Y.—A new grain and feed jobbing firm has been formed here, the Co-operative Feed Dealers, Inc., owned and operated by a group of grain and feed merchants. Herbert R. Barndt, pres. of the Reliance Feed & Grain Co., Inc., will be manager, with F. C. Daniels as his assistant.

Buffalo, N. Y.—Henry P. Werner, of this city, pres. of the Hecker H-O Co., is in Bellevue Hospital, New York City, following an accident in which an automobile struck him, injuring him seriously. At last report he was showing some improvement. Several blood transfusions were necessary. Mr. Werner had gone to New York on business.

Buffalo, N. Y.—Altho installation of machinery is not entirely completed, the Vita-Vim Millers opened their new feed mill on Scott St. (reported in the Jan. 13 Journals as being remodeled for the company's use) late last month, still continuing part operation of the old plant on Market St. The company will have a capacity of 30 carloads of poultry and dairy feeds a day. A portion of the new plant will be set aside for a feed research department for diagnosing poultry diseases.

NORTH DAKOTA

Bisbee, N. D.—V. C. Gores has moved to Fargo and engaged in the insurance business. He was formerly in the grain business in this city.

Finley, N. D.—The Farmers Grain & Elevtr. Co. has placed an order with R. R. Howell & Co. for a large motor driven Grain and Seed Cleaner.

Hettinger, N. D.—L. V. Duhcanson, pres. and manager of the Mott Mill & Elevtr. Co., Mott, N. D., has purchased the local elevator from Geo. M. Schuler, manager and owner of the G. M. Schuler Grain Co.

Luverne, N. D.—If there is a good crop in sight in July, we will do quite a bit of repair work, new bearings and shafts thruout, perhaps motor-driven leg. Ours is the only elevator in town doing business.—Farmers Co-op. Elevtr. Co.

Jamestown, N. D.—New members of the Farmers Grain Dealers Ass'n of North Dakota are as follows: Elk Valley Farmers Elevtr., Larimore; Farmers Union Co-op. Elevtr. Co., Stanley; Farmers Elevtr. Co., Crystal; Farmers Co-op. Elevtr. Co., Watford City; LaMars Co-op. Elevtr. Co., Fairmount.

OHIO

Leesburg, O.—The Dewey Bros. Co. suffered damage to its elevator and feed plant by wind Feb. 21.

Lykens (Bloomville p. o.), O.—A new display building and office 40x100 feet, is being erected at the elevator of Edgar M. Hieber.

Mortimer (Findlay p. o.), O.—Contract for the new elevator of the North Baltimore Grain Co. was given to the Sidney Grain Mch. Co.

Derby, O.—Alva Hill, owner of the Hill Grain Co., is remodeling his elevator, providing more bin room, and will install a complete feed grinding and mixing outfit.

Olive (Caldwell p. o.), O.—E. G. Tarleton, owner and operator of a flour mill here for many years, has sold his business and all real estate to John Saling, a farmer.

Urbana, O.—The Urbana Mills, which have the only elevator at this point, have been taken over by Clark & Chamberlain, who operate elevators at North Lewisburg and Mingo.

Oak Harbor, O.—The Ottawa County Co-op. Grain Co. is now operating its Randolph Grain Drier at its plant here managed by Mr. Schmunk. This drier is equipped to operate on oil as fuel.

Delphos, O.—Garman Grain Co. has made extensive improvements at its elevator with collector, new elevator, shafting, V rope drives, and miscellaneous equipment, all furnished by the Sidney Grain Mch. Co.

DeLisle (Arcanum p. o.), O.—V. E. Herter & Co., of Dayton, O., recently installed a 1½-ton Kwik-Mix Mixer and a dust collector for the hammer mill at their plant here, the equipment being furnished by the Sidney Grain Mch. Co.

Oak Hill, O.—Two feed mixers were recently installed in the feed plant of the Gills Produce Co.

Delphos, O.—R. C. Calvelage, of Ft. Jennings, has been named manager of the Delphos Equity Exchange Co.'s elevator, succeeding Joseph Beckmann, and managing both the Delphos elevator and the Ft. Jennings Equity Co.'s elevator.

Hicksville, O.—The Mettert Feed Mill burned at 9:30 p. m., Mar. 15; loss, \$12,000. The blaze apparently started in the storage bins. Partial insurance was carried on building and contents. Henry Mettert has been the owner and operator of the mill for the past ten years.

OKLAHOMA

Yukon, Okla.—We are contemplating putting out a line of mash feeds and also dairy feeds within the very near future, in fact, we are installing the machinery at the present time.—Yukon Mill & Grain Co., R. B. Kroutil, vice-pres.

Cherokee, Okla.—Hamilton Milling Co., incorporated; capital stock, \$25,000; incorporators: Frank, Alta and Minnie Hamilton; to establish a feed and flour mill and buy and sell grain, feed, flour and coal.

Enid, Okla.—The W. B. Johnston Grain Co. has let a contract to the A. F. Roberts Const. Co. for the erection of a 75,000-bu. concrete elevator. Work started about the middle of this month tearing down the present frame elevator to make room for the new one, actual work on which is expected to start Apr. 1, completion to be in 60 days.

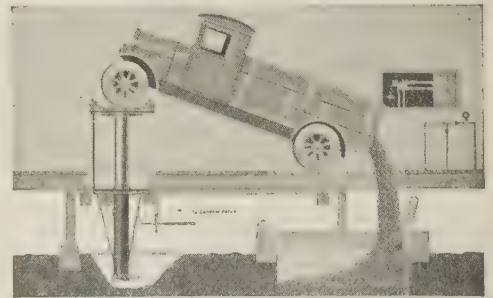
Hunter, Okla.—We let a contract Mar. 3 for the construction of a 75,000-bu. re-inforced concrete elevator. The storage will consist of four circular tanks 14 feet in diameter by 90 feet high, with two interstice bins and seven overhead bins. The headhouse will be 15x33 feet, 24 feet high. It will be equipped with a 4,000-bu. leg, 10-bu. automatic scale, powered manlift and head suction system. Driveway will be 13 feet 6 inches by 37 feet by 12 feet 6 inches high, with double dump pit and 6-foot air lift dump. The plant was designed by the A. F. Roberts Cons.

STRONG-SCOTT

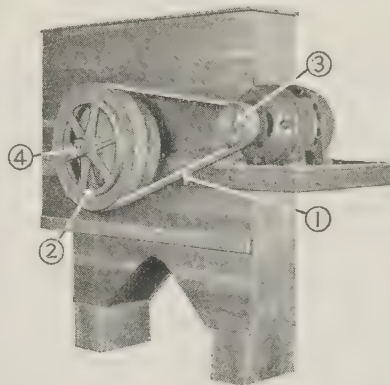
Means Economical and Efficient Operation

Pneumatic Dump

It is the only vertical-lift dump that can be hung from the scale timbers. This means lower installation cost and, most important of all, no interference with correct weighing. Handles all trucks quickly, quietly and safely. Write for particulars.

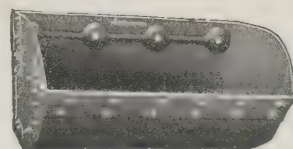


Strong-Scott Head Drive



It's the ONLY head drive that will deliver so high a percentage of your motor's power to the head shaft. Note these features: The V-Belt drive (1) has been proved 99% efficient. The automatic Back Stop (2) can't fail and can't stick. Leg speed can be changed easily by changing (3) sheave on motor. Planetary gears (4) in oil bath, 97% efficient.

D. P. Cups and Strotco Belting



Superior D. P. Cups are guaranteed to give 20% greater capacity and the qualities of Strotco Belting have increased its sales each year tremendously. It will pay you to put this combination to work.



Everything for Every Mill, Elevator
and Feed Plant

The Strong-Scott Mfg Co.
Minneapolis Minn. Great Falls Mont.



Co. and contract for the construction was awarded to them—Thompson-Wilson & Thompson Grain Co.

PACIFIC NORTHWEST

Govan, Wash.—The Almira Farmers Warehouse Co. on Feb. 26 was damaged by wind.

Sequim, Wash.—A new seed cleaner and separator was recently installed at Dawley's Feed Mill, a half mile west of Sequim.

Hillyard, Wash.—The Inland Grain & Feed Co. has installed a separator in its feed plant, replacing a small blower formerly used.

Pullman, Wash.—Fire of undetermined origin partly destroyed the feed mill of the Pullman Grain Growers, Inc., at 9:30 a. m., Mar. 3; loss, nearly \$2,000; covered by insurance. The plant will be rebuilt.

Longview, Wash.—A business license tax ordinance, intended to raise approximately \$11,000 annually, was approved unanimously by the Longview city council last month, the tax on grain elevators being \$50 each.

Twin Falls, Ida.—The Gibbs Bean Elvtr. is erecting a warehouse and office building on a 10-lot building site recently purchased, the building to be 250x115 feet. Mr. Gibbs established his business here 12 years ago.

Kendrick, Ida.—The local warehouse of Lewiston Grain Growers, Inc., housing about 40,000 bus. of sacked wheat, was wrecked by a miniature tornado last month, which lifted about 140 feet of roof, the side walls falling across the railroad tracks. About 150 sacks of wheat tumbled off the piles, the remainder of the grain remaining piled. The warehouse will be rebuilt as soon as weather permits.

Spokane, Wash.—Among the various speakers at the annual meeting of the Pacific Northwest Chemurgic Conference, held here Mar. 22, was Dr. H. K. Benson, University of Washington, on "Chemical Industries for the Northwest." W. L. Beuschlein, associate professor of chemical engineering, discussed fertilizers. "Industrial Uses of Grain" was the topic of F. B. McKenzie, chief chemist of the Carnation Albers Laboratory. Robert Prior, co-ordinator of the United Dairymen's Ass'n, discussed solvents and plastics.—F. K. H.

Sweetwater, Ida.—Contract for construction of a new elevator here, to replace the structure destroyed by fire last August, has been let by the Lewiston Grain Growers, Inc., to W. J. Morrell, work to start immediately. It will be a 159,000-bu. plant, covered with galvanized iron, and up-to-date machinery and equipment will be installed. The elevator will be 110 feet high, fitted with 30 bins, and will be complete, from head house to dump. The flat warehouse will be 50x150 feet, with corrugated iron roof and walls and with concrete floor.

Portland, Ore.—Henry W. Collins, vice-pres. and Pacific Coast manager of the Continental Grain Co., has resigned his position, effective Mar. 15, to become West Coast manager of the Archer-Daniels-Midland Co., which is extending its grain operations to the Pacific Coast. The company also has a large linseed oil plant in Portland, and has done much to encourage the production of flaxseed in this section. It is the purpose to engage in both export and domestic handling of wheat and other grains. Mr. Collins' territory will consist of Oregon, Washington, Idaho, Montana and California. Country buying agencies will be established in the principal grain producing sections of the Northwest, with terminal agencies in the principal cities. Negotiations are under way for terminal facilities.—F. K. H.

Creston, Wash.—Six actions against insurance companies for failing to pay on policies covering wheat which was supposed to have been in the Creston Co-op. Grain Co.'s elevator and warehouse here on Mar. 1, 1936, when the plant burned, have been filed in superior court. The F. M. Martin Grain & Milling Co., of Cheney, Wash., filed separate actions against several insurance companies, asking a \$6,190.98 judgment against each. The company claims it had 31,294 bus. of wheat in the Creston warehouse when the fire occurred. Each of the insurance companies claims that the grain company had no wheat in storage in the Creston plant at the time of the fire, and each refuses to pay the insurance. Following the fire, C. A. Conner, manager of the grain plant, was arrested and pleaded guilty to an arson charge, and is now serving time in the penitentiary.

Cottonwood, Ida.—The Cottonwood Elvtr. Co. is just starting construction of a new 130,000-bu. concrete elevator entirely fireproof, to replace its fire loss of last October, contract having been let to Alloway & Georg on Mar. 10, completion to be June 1. The new house will give the company a total storage capacity here of 300,000 bus.

Salem, Ore.—House Joint Resolution 14, which would submit an amendment to the state constitution to the voters, regarding "all raw agricultural commodities, their production, transportation and processing, . . . affected with the public interest," would pave the way for all kinds of price fixing, control of production, etc. The resolution has been indefinitely postponed by the Oregon State Senate, which kills the measure for this session.

Olympia, Wash.—Following are some recent pieces of legislation of interest to grain dealers: Unfair Sales Act, Senate Bill 270, proposed by the Washington Merchants Ass'n, passed by the Senate, but on reconsideration was defeated by one vote. H. B. 511, grain warehouse law amendments (passed), a set of administrative amendments to the Grain Warehouse Act, prepared by the Dept. of Ag., to simplify and strengthen the present grain warehouse law. S. B. 388 will preserve the storage of grains in the state, and make needless any expensive and uneconomic movements from storage at tax assessment time. S. B. 70, Fair Trade Act (not to be confused with S. B. 270, the Unfair Sales Act, which was defeated) protects manufacturers in their right to agree with retailers on the prices and terms of sales of trademarked goods. H. B. 107, a bill which exempts conditional sales of personal property where the unpaid purchase price does not exceed \$50, from the requirement of being filed within the 10-day period.—Floyd Oles, mgr., Pacific Northwest Feed Assn.

Olympia, Wash.—The 25th Washington Legislature accomplished much of value to the trucking industry. A unified program advocated by organized trucking groups was passed almost intact. While the measures were carrier-sponsored, they appear to safeguard the interest of the public and shipper. The one sour note is found to be an increase in the gasoline tax from 5 to 5½¢ a gallon (just vetoed by the Governor). The 1% gross revenue tax was abolished and a regulatory plate fee of \$2 a truck plus fees ranging from \$7 to \$10 per truck or trailer was placed on vehicles of common and contract carriers. The driver's license fee (for two-year period) is increased to \$2. The department of public service was vested with the authority, effective Apr. 1, to construct, publish and distribute tariffs for common carriers under its jurisdiction. A move was made toward regulating the "private carrier" who has been hauling for compensation. City cartage carriers of Seattle, Tacoma and Spokane were put under WDPS regulation. Weight and length limitations were written into the law.—F. K. H.

PENNSYLVANIA

Telford, Pa.—Remodeling of the Valley Mill has been completed and it is in operation again.

Clarkestown (r. d. Muncy), Pa.—Turner & Thomas recently installed a new feed grinder in their mill here.

Arendtsville, Pa.—The Saddler Feed Mill, located between this town and Biglerville, has been bot by Leroy and T. Zeigler, of East Berlin, Pa.

Clintondale, Pa.—The controlling interest in the Clintondale Milling Co. has been bot by Oscar Roger, who plans to add a feed department to the flour mill.

Greencastle, Pa.—New equipment is being installed by J. I. Eshelman & Son in the former Coldsmith Mill which they recently purchased. The Eshelman firm also operates at St. Thomas, Pa.

West Chester, Pa.—Elijah D. Hamphill, who retired in 1920 from the grain and feed business he had conducted here for more than 40 years, died recently, following a brief illness. Mr. Hamphill, who was 92 years of age, was a member of the Philadelphia Commercial Exchange.

SOUTH DAKOTA

Parkston, S. D.—A new 11-inch, 5-ply bucket belt is being installed by the Farmers Elvtr. Co.

Grain Contracts with Farmers

Form 10 D. C. is recognized as the best for contracting grain and seed from farmers, and is in extensive use by grain dealers. Do not take chances with verbal contracts. They lead to misunderstandings, differences and disputes, as well as loss of profits and customers. Contract certifies that farmer:

"has sold.....bushels of.....at..... cents per bushel, to grade No....., to be delivered at.....on or before....." It also certifies that, "if inferior grain is delivered, the market difference at which such grain is selling on day of delivery shall be deducted. Any extension of time at buyer's option."

Originals are printed on bond paper, machine perforated so they may be easily removed; duplicates are of manila. All have spaces ruled on the back for recording each load delivered on the contract. Check bound, size 5½x8½ inches, 100 sets numbered in duplicate and supplied with 4 sheets of carbon paper. Order Form 10 DC Improved. Price \$1.10, f. o. b. Chicago. Wt. 1 lb.

Triplacating book is same as 10 DC and contains 100 additional copies of the contract printed on strong tissue and 4 sheets of dual faced carbon. Order Form 10 TC. Price \$1.35, f. o. b. Chicago. Weight, 21 ozs.

Grain & Feed Journals

Consolidated

332 So. La Salle St. Chicago, Ill.

Cipher Codes

Universal Grain Code: Most complete, up-to-date grain code published. Effects a greater reduction in tolls than any other domestic code. 150 pages, 4½x7 inches. Price, leather, \$3.00; paper, \$1.00.

Robinson Telegraph Cipher Code: Revised with all supplements, for domestic grain business. Leather, \$2.50; cloth, \$2.00.

Dowling's Grain Code for Grain Milling and Produce Trades, 6th edition: Used extensively in Western Canada. 154 pages, 4½x6½ inches. Weight 4 ozs. Price \$3.00.

Millers Telegraphic Cipher: (1936) For the flour feed and grain trades. 157 pages, 3½x6½ inches. Cloth bound. Weight 6 ozs. Price \$2.00.

Cross Telegraphic Cipher: 10th edition revised for provision and grain trades. 148 pages, 4½x5½ inches. Cloth \$4.00.

A. B. C. Improved Fifth Edition with Sup.: Reduces cable tolls 50% thru use of five-letter words, any two of which may be sent as one. In English. Price, \$20.00.

Bentley's Complete Phrase Code: Contains nearly 1,000 million combinations, any two of which can be sent as one word. Thru its use a saving of 50% can be effected in cablegrams. 8½x10½ inches. Leather back and corners. \$10.00.

Peerless Grain Code for international grain and feed trades. 300,000 different offers expressed by one half codeword combining Destination, Time of Shipment, Quantity, Quality and Price. 10,000 complete Phrases relate to Export grain trade. Private Supplement contains 3000 blank code words. Price \$85.00.

Baltimore Export Cable Code: Hinrich's fourth edition, completed especially for export grain trade. 152 pages, 6½x9 inches, bound in leather. Price \$15.00.

Riverside Flour Code, Improved (5 letter revision): Sixth edition. For use in domestic and export trade. Size 6x7 inches, 304 pages. Bound in flexible leather, \$12.50.

All prices are f. o. b. Chicago.

GRAIN & FEED JOURNALS

Consolidated

332 So. La Salle Street CHICAGO, ILL.

Elkton, S. D.—The Frank Mangan Grain Co. has purchased the Davenport Elvtr. Co.'s elevator located on the R. I.

Turton, S. D.—George Letourneau has been appointed manager of the Eagle Roller Mills elevator at this point, succeeding Loren Ewing.

Groton, S. D.—The Bagley Elvtr. Co. will make improvements at its plant, including construction of a warehouse and coal sheds and installation of feed grinding machinery. Earl Rapp is the local manager.

Watauga, S. D.—Joe Sahli, for three years manager of the Equity Elvtr. here, has accepted a similar position at Garrison, N. D. Jack Bigham, of McIntosh, S. D., will succeed him as manager of the local elevator.

Marion, S. D.—The Farmers Co-op. Elvtr. Co. has installed a Winter Head Drive and enclosed type Fairbanks-Morse Motor for the ground feed leg from the attrition mill. The equipment was purchased from R. R. Howell & Co.

Holmquist, S. D.—Two elevators of the Farmers Elvtr. Co. burned Mar. 16 at about 9 a. m.; loss, \$60,000; buildings and contents were well protected by insurance. Included in the loss were a 45,000-bu. elevator erected last fall, an older, 20,000-bu. house, 15,000 bus of stored grain and all equipment.

SOUTHEAST

Brookneal Va.—The Brookneal Mills recently installed a new diesel engine.

Broadway, Va.—The Broadway Milling Co. has added a feed mixer to its equipment.

Appomattox, Va.—The Rosser Milling Co. is now operating its new 80-barrel flour mill.

Hardy, Va.—The Lynnvile Roller Mill has installed a 25-barrel mill, completely equipped.

Alton, W. Va.—Frank Zirkle has improved the equipment of his mill by adding a new feed grinder.

Harrisonburg, Va.—A new hammer mill has been installed in the plant of J. H. Turner, near here.

Gladys, Va.—Additional machinery has been installed at the Gladys Milling Co.'s mill, which has been remodeled, also.

Lindside, W. Va.—A feed and flour mill is being installed at this place, to be operated by the Lindside Milling Co.

Leaksville, N. C.—A loss of \$15,000, partly insured, was caused by fire at the Liberty Mill recently, which was destroyed.

Aurora, N. C.—Litchfield Bros. recently installed a large grader which they purchased from the Sidney Grain Mchv. Co.

South Hill, Va.—The capacity of the Mecklenburg Milling Co.'s mill has been increased to 140 barrels, the mill remodeled and new machinery installed.

Greenwood, S. C.—A four-story flour mill with a capacity of 150 barrels per day will be erected here by the Allen Bros. Milling Co., which operates mills at Wadesboro and Columbia, N. C.

Albemarle, N. C.—M. M. Palmer, G. C. Morton and J. V. Moose have formed a company and have bot the Lowder Milling Co.'s 150-barrel mill here, the purchase price being about \$20,000. Feed and cornmeal will be manufactured as well as flour. Mr. Palmer will be plant superintendent.

TENNESSEE

Kyles Ford, Tenn.—The Livesay Mill is the new name of the former Kyles Ford Roller Mill, being a change in name only, not in management. Thomas Livesay is the proprietor.

TEXAS

Houston, Tex.—Construction work has started on a new plant for the Rogers Grain Co., which will consist of a corrugated iron warehouse 60x160 feet. Bruce Carter is manager of the Rogers Co.

WISCONSIN

Superior, Wis.—The old 2,250,000-bu. elevator here, known as Cargill Elvtr. "N," is being razed.

Evansville, Wis.—Green & Co. seem to do things in a speedy manner. They sent over their truck to the O. W. Randolph Co.'s shop, To-

ledo, O., on Saturday morning, Mar. 6, for their first load of grain drying equipment and in the meantime they proceeded with the erection of their building. On Mar. 11 their trucks arrived for the last shipment of parts for their grain drier, which they immediately proceeded to assemble. On Tuesday, Mar. 16, these people were drying grain over their Randolph Drier. The building and drier were installed within ten days from the time the order for the drier was received, and it shows how easily the Randolph Drier can be assembled.

MILWAUKEE LETTER

Max E. Marquardt, a grain broker and lifelong resident of this city, died at Milwaukee Hospital, Mar. 5, several days after an emergency operation for appendicitis. He was 51 years of age.

The Milwaukee-Western Malt Co. has let the contract for a new malt house, grain elevator headhouse and storage annex to the Klug & Smith Co. The Burrell Engineering & Const. Co. is subcontractor for the headhouse and storage annex.

The net income of the Froedtert Grain & Malting Co., Inc., for its fiscal year ended Jan. 31, 1937, was \$1,020,792, or \$2.03 a common share, being an advance of 26.3% over net of \$808,205, or \$1.57 a common share, for the preceding fiscal year.

The primary election for choosing of regular nominees (two for each office) for the Milwaukee Grain & Stock Exchange, will be held on Saturday, Mar. 27. The annual election will be held on Apr. 5. The caucus for the proposing of candidates to be balloted on at the primary, was held Mar. 20, with the following results: For pres., J. V. Lauer; first vice-pres., E. S. Terry; second vice-pres., E. Heimke; sec'y and treas., H. A. Plumb. Directors: A. M. Kayser, C. A. Houlton, A. E. Bush, R. I. Campbell, J. P. Hessburg. Board of arbitration: R. G. Leistikow, LeRoy LaBudde, R. G. Bell. Board of Appeals: A. L. Flanagan, Ed LaBudde, H. M. Stratton.

Members of the Milwaukee Grain & Stock Exchange presented a box of apples to J. M. Riess, 74, when he recently celebrated his sixtieth anniversary in the grain and malting business here. He started at the age of 14 with the G. J. Hansen Co., becoming superintendent for the company in 1886, and continuing with the American Malting Co., which bot out the Hansen Co., until 1918 when he opened his own business, which now includes two malt houses and one grain elevator.

Books Received

STATISTICAL ABSTRACT of the United States, 1936, is a summary of authoritative statistics showing the trends in trade and industry as well as social progress and is a convenient reference work for business men, economists and statisticians. Major sectional headings include Area and Population, Immigration, Emigration, and Naturalization, Public Lands, Climatic Conditions, National, State and Local Government Finances, National Wealth and Income, Business Finance, Prices, Transportation by Air, Land and Water, Foreign Commerce, Farms, Farm Animals and Products, and a wealth of other valuable data. Published by the Government Printing Office, Washington, D. C. Price, \$1.50.

SECOND DEARBORN CONFERENCE of Agriculture, Industry and Science contains the assembled papers delivered at the May, 1936, conference held under the sponsorship of the Farm Chemurgic Council and the Chemical Foundation, Inc. Valuable information on the association of industry and agriculture, and industrial uses now and in the future for farm products, from the minds and pens of this country's leading scientists and industrialists, is published. Subjects covered include a symposium on new things, power alcohol, starches and sugars, plastics, cellulose, soy beans, insecticides and fertilizers. Industrial uses for soy bean oil and soy bean proteins, and the growth and use of plastics, are of greatest interest to grain dealers. The effects of fertilizers on farm crops and the results of experiments with gasoline and alcohol-gasoline blends will be found of similar interest. Published by the Farm Chemurgic Council, Dearborn, Mich. Price, 50c postpaid.

LABOR strikes and riots—
Little respect for property rights and courts—New York squabbling with Germany — racial hatreds increasing and a "bull market" in wild dreams and fanaticisms. No wonder leading senators at Washington are becoming aroused. If these floutings at basic principles of American liberty continue — none of us will be safe. Therefore— it's up to you, Mr. Average Citizen — to make America "safe for democracy."

LOWELL HOIT & CO.

Treating Seed Wheat for Smut

In the last few years the copper carbonate dust method of treating seed wheat for smut has been widely recommended and is now used more than any other treatment.

It is best to use seed wheat which has been carefully cleaned. This not only removes most of the chaff, weed seed, shriveled and broken wheat kernels, but it removes a large amount of the smut balls at the same time.

The seed and copper carbonate dust must be thoroly mixed in a treating outfit so that all the grain is covered with the chemical dust. It requires at least a minute and a half to two minutes to mix a batch of seed with a concrete mixer or one of the home-made barrel mixers. For ordinary smutted seed two ounces of copper carbonate (50 to 55 per cent copper content) to the bushel of seed is sufficient. Some manufacturers recommend more than two ounces, depending upon the make of copper carbonate. A heaping tablespoonful will weigh very close to an ounce. If the seed is black with smut use other seed or use the standard formaldehyde treatment, which is more effective than the copper carbonate method under such conditions.

The brands of copper carbonate that analyze from 50 to 55 per cent copper have given the best results and two ounces to each bushel of wheat treated is an adequate dosage. Some makes of copper carbonate are in a dilute form and analyze between 18 and 20 per cent copper. Where these brands are purchased, from three to four ounces to the bushel of seed will give best results.

Commercial machinery is very satisfactory for treating large quantities of seed wheat. A barrel smut-treating machine or a barrel churn, are satisfactory outfits where small quantities of seed wheat are to be treated. Merely shoveling the seed and copper carbonate together in a pile or in a wagon box, or stirring the seed and dust together in the drill will result in failure.

Copper carbonate dust should not be inhaled by workmen, as it causes nausea, irritation, and watering of the eyes. These can be avoided by wearing a dust mask, or by placing a wet handkerchief over the nose and mouth. Treating grain should be done in the open air when possible.

Field Seeds

Grant City, Mo.—Grant City Produce Co. has a new seed cleaner, and new sacking and receiving elevators.

Lebanon, Ind.—The Jarrell Feed & Seed Co. of Thorntown has established a branch store here, with Ralph Jarrell in charge.

San Francisco, Cal.—The California Seed Council meeting on Mar. 9 was well attended by members of the Pacific States Seedsmen's Ass'n who heard Assembly Bill 1899 discussed.

Stockton, Cal.—Paramount Seed Co. has been organized with \$100,000 authorized capital, by John O. Knox, pres.; James Knox, vice-pres., and Melvin Muscio, sec'y-treas.

Jefferson City, Mo.—Seedsmen from Kansas City, Springfield, St. Louis and Sedalia, members of the Missouri Seedsmen's Ass'n, met here Mar. 9 to discuss pending state legislation.

Albion, Pa.—John Halchin and Mr. Cherry have started a retail mail order seed business as Halchin-Cherry Seed Co. Price lists were released Feb. 27 thru northwestern Pennsylvania and eastern Ohio.

Minneapolis, Minn.—The Hinman Seed Co.'s warehouse, in which was also housed the Salt Supply Co., was destroyed by fire Mar. 14. Estimated loss on stock and machinery, exclusive of the building, \$40,000.

Waterloo, Ia.—A. C. (Bert) Willford, 59, of the Willford Seed & Feed Co., passed away at his home Mar. 10, from a heart attack. He was Congressman in 1932. Surviving are his wife and one son.—Art Torkelson.

Spencer, Ia.—A mail order and retail farm and garden seed business is an expansion of the Woodcock Floral Co. thru affiliation with M. R. Showers. A new salesroom and warehouse has been opened on South Main street.

Clarinda, Ia.—Court hearings started Mar. 3 on the suit of John Clark of Kansas City, against the Berry Seed Co. for alleged personal injuries suffered in a collision between a Berry Seed Co. truck and his car near Bethany, Mo., last spring.

Bloomington, Ill.—Dr. J. R. Holbert of the U. S. D. A., and R. J. Laible, McLean county farm adviser, have become associated with Funk Bros. Seed Co. to work on a hybrid seed corn production program, as well as breeding and improvement of other farm seeds.

Olympia, Wash.—House Bill 185 has been adopted and is now state law. It prohibits limitation of the blue seed certification tag, thereby protecting seed buyers from fraud. The limitation of 8 ounces as a maximum for seed packets which may be sold without a seed license was retained in the law.

Montesano, Wash.—A new seed cleaner has been installed by the Montesano Feed & Seed Co.

Markesau, Wis.—Elmer Wilde & Sons of Green Lake Center are opening a seed and feed store here.

Caldwell, Ida.—The Crookham Co. is building a 60x108 ft., three-story and basement, seed cleaning and storage house, to be completed July 1.

Postville, Ia.—A new peak in the seed business of Hall Roberts' Son was struck Mar. 8 and 9, when the elevator sold \$12,000 worth of field seeds to Wisconsin and Iowa farmers and seedsmen coming for the merchandise with trucks. The company advertises freely.

Nampa, Ida.—Associated Seed Growers, Inc., of New Haven, Conn., has opened a branch seed receiving and distributing station here, with L. G. Sorenson in charge. A two-story warehouse has been purchased and is being remodeled, re-roofed and resided, and fitted with cleaning machinery.

Princeton, Ill.—Illinois Hybrid Seed Co. has purchased one acre of ground from Frank Poscharsky, on which to erect 20 buildings for hybrid seed corn offices, drying, and storage. J. F. Lower, in charge, plans to contract 900 acres on selected Bureau county farms for hybrid production.

Plainfield, Ill.—William Webb, 75, Illinois state champion seed corn grower, a national worker for corn improvement, passed away at his home here Mar. 13. Retiring from active farming 12 years ago, Mr. Webb experimented with seed corn, and won a number of championships at the Illinois state fair.

Hardy, Ark.—Analysis of samples drawn by state inspectors from 65 bags of Korean Lespedeza seed in possession of a Hardy merchant showed approximately 4,000 dodder seed to the pound. Notified that the seed would be confiscated unless promptly moved, the merchant trucked it to his branch house at West Plains, Mo.

Madison, Wis.—A bill appropriating \$1,000,000 from the state general fund for emergency seed and feed loans to farmers in the 1936 drouth area, has been signed by Gov. Phil La Follette. Special farmer committees in allocated counties will administer the funds, making maximum loans of \$100, payable in two years without interest.

Gould, Ark.—Largen Lespedeza Co., Fayetteville, Tenn., shipped 1,700 lbs. of lespedeza seed to a merchant and farmer at Gould, Ark., which was confiscated Mar. 11 by the Arkansas Plant Board. John E. Casey, the Board's seed analyst, estimated the shipment contained approximately 36,000 dodder seeds per pound. The seed was shipped without analysis tags attached.

Galesburg, Ill.—Permil N. Nelson, of Galesburg, credited with selling "Magic Crop Protection" to Illinois farmers as a preventive of damage from grasshoppers and chinch bugs, if applied to the seed before planting, has been incarcerated in the Hancock county jail, charged with obtaining money under false pretenses, according to announcement of L. A. Moore, superintendent of the Illinois Division of Plant Industry. A chemical analysis of the "crop protection" by the laboratories at the University of Illinois and Iowa State College, showed it to be 99.9% coal oil, colored with green dye such as is used to color gasoline.

Marshall, Minn.—The Porter Seed Store has opened here with Geo. Joregenson in charge.

Lincoln, Neb.—Herschell H. Mason, alias several other names, who once "sold" seed or baby chicks to farmers, pocketing the money received by mail, is serving a term in the Nebraska state penitentiary for obtaining money under false pretenses. His latest racket was to open a food store, obtain merchandise on credit, then sell it at or below cost, skipping out with the money.

In the fall of 1936 a seedsman in the South sold rye for seed which in November germinated only 40 to 60%. The seedsman claimed the seed was good because it was Grade U. S. No. 1 rye according to federal grain standards. But the U. S. grain standards are only for grain in commercial channels intended for processing. They do not provide for germination tests or suitability for seed purposes. There are no U. S. seed standards. U. S. No. 1 rye may contain 14% moisture, which is not too much for commercial purposes, but rye containing 14% moisture will drop in germination quickly under storage conditions common in the South and become unsuitable for seed.

Washington, D. C.—A creeping alfalfa, discovered by H. L. Westover, forage specialist of the Bureau of Plant Industry, on an exploration trip three years ago, in a stony goat pasture in a semi-arid region of northern Turkey, promises to be valuable for grazing. The goats had grazed the pasture so closely that it was impossible to obtain seed. However, a root was dug from the stony ground and sent back to the U. S. Department of Agriculture. More than 2,700 plants were obtained from the original plant by a series of stem cutting. Cuttings in 30-inch rows in the sand hill country near Hyannis, Nebr., sent out shoots that rerooted in the first season as far as 12 inches from the crown. This experiment is in co-operation with the Nebraska station.

Timothy Adapted to Wide Range of Soils

Timothy is the most important hay grass in the United States, and wherever adapted it usually is an ingredient of pasture mixtures. It is a perennial that frequently reaches a height of 30 inches or more, and that propagates by seed and by new branches growing from buds in the axils of the leaves.

Adaptation—Timothy is better adapted to a cool, humid climate, than to a hot, dry climate. Altho it grows on a wide range of soils, it is best suited to clay loams and silt loams. It is grown thruout Illinois.

Culture—Timothy may be seeded with small grain or alone, either in the spring or in the fall. Probably 60 per cent of the crop is seeded in the fall with small grains, the rate of seeding being about 15 to 20 pounds of timothy an acre.

Uses—Timothy is one of the most palatable of pasture grasses; all classes of grazing animals relish it. It probably should be included in most pasture mixtures for use on land of average to high fertility. Under normal conditions it increases the early carrying capacity of the pastures. Seeded with bluegrass or with bluegrass and legumes, timothy usually furnishes grazing for a full season before the bluegrass has developed enough to carry its share of the grazing.

When seeded in mixtures with bluegrass where bluegrass is well adapted, timothy is gradually crowded out. When used in pure stands, it does not furnish as much grazing as bluegrass, and weeds are usually more troublesome than in good stands of bluegrass.

Other disadvantages of timothy pasture are that it starts rather late in the spring and does not well withstand dry, hot weather.—Ill. Exp. Sta.

Directory

Grass and Field Seed Dealers

CRAWFORDSVILLE, IND.
Crabbs, Reynolds, Taylor Co., clover, timothy.

GREEN SPRINGS, OHIO
The O & M Seed Co., seed merchants.

PAULDING, O.
Stoller's Seed House, wholesale field seeds.

ST. LOUIS, MO.
Mangelndorf & Bro., Ed. F., wholesale field seeds.
Scott, T. Maurice, field seeds, carlot originator.

SAULT STE. MARIE, MICH.
Soo Terminal Co., grass, flax, peas.

SIOUX CITY, IOWA
Sioux City Seed Co., seed merchants.

Hybrid Corn First Generation Only

In the seed bargain catalogues of two seed companies recently circulated among Indiana farmers, according to Dr. H. R. Kraybill, State Seed Commissioner at Purdue, seed corn was advertised as "First Generation Removed from Hybrid." This statement and a similar one, "Second Generation Hybrid," may be misleading, Kraybill declares, because neither of them represents true hybrids. The catalogue price of the second generation corn is \$6 to \$6.50 per bushel, while this same corn can be purchased at market feed price from most farmers who planted hybrid corn in 1936. All advantages of inbred corn are lost after the first generation, Purdue seed corn specialists point out.

Kraybill calls attention to the following Indiana ruling, effective Jan. 1, 1937, concerning the labeling of hybrid seed corn:

"Field corn, sweet corn, and pop corn offered or exposed for sale for seeding purposes in the state of Indiana may be labeled or represented to be hybrid corn only when such seed represents the first generation of a cross between strains of different parentage and involving inbred lines of corn and/or their combinations."

Seed Bill in California Legislature

A bill, A. B. 1899, introduced in the California assembly by Thorpe, provides for issuance of certificates for pest free seeds by county commissioner of agriculture.

Planting, sales, or transport unlawful, unless each container over three pounds, if for seed, carries such certificate from county of origin. Farmer owner may plant his own seed uncertified. Crop seed includes grasses, cereals, legumes, and all commercial field crop seeds (not flower). Certificate issued 10 days before harvesting for seed. Pests found and method of eradication indicated by Commissioner and when grower has complied, certificate is issued, or person having possession of local or imported crop seed applies for official commissioner inspection.

If infested, crop seed to be cleaned only by licensed cleaner. A followup inspection permits certificate if seed found clean. Seed screenings containing pest seeds is public nuisance and must be processed by grinding, etc., before removal, under commissioner su-

pervision. May permit moving for destruction. Unlawful to operate seed cleaning equipment to clean crop seed without an annual license from director each July first at cost of \$10. If inspection of cleaning equipment O. K., license issued. Equipment must clean out seed of all pests. License revocable for various reasons. Unlawful to remove, alter, deface or misuse the certificates on crop seed containers.

Sources of Adapted Alfalfa, Red Clover Seed

Thirty-one states and Canada have been designated as sources of "adapted" alfalfa and red clover seed for the purposes of the 1937 Agricultural Conservation Program in the North Central Region. By sowing red clover and alfalfa seed produced in any one of these 31 states or Canada and obtaining good stands, farmers can qualify for soil-building payments made for these practices in the North Central region. Planting alfalfa and red clover seed from other states will not qualify. This order was signed Mar. 18 by Sec'y of Agriculture Henry A. Wallace. The North Central Region States are Indiana, Ohio, Illinois, Wisconsin, Minnesota, South Dakota, Iowa, Nebraska, Missouri and Michigan.

Following are the designated sources of "adapted" alfalfa and red clover seed for the North Central Region: Colorado, Connecticut, Delaware, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Virginia, West Virginia, Wisconsin, Wyoming and Canada.

Freezing Wheat Heads in Breeding Work

Wheat breeding always has been an operation requiring delicacy of touch and technical skill. The wheat flower ordinarily fertilizes itself before it opens, thus keeping itself safe from contamination by foreign pollen. In this way, wheat ordinarily breeds true to type. To remove the minute stamens at just the right stage in growth is an operation that compares with difficult surgical manipulations, requiring both skill and knowledge. The most skillful workers are not able to make many crosses in a day.

Coit A. Suneson of the Bureau of Plant Industry has announced results of experiments in which by chilling them he emasculated the heads of wheat plants, killing the pollen and thus preventing the normal self-fertilization of the wheat florets, and at the same time opening up the head so that it was easy to apply pollen collected from another variety of wheat.

Working at Lincoln, Nebr., Mr. Suneson brought wheat plants to the stage where heads were forming but had not emerged from the protective sheath. At this stage some of the plants were exposed outdoors, others in refrigerator rooms, to temperatures ranging from 27 to 32 degrees Fahrenheit. This killed the pollen and rendered the heads self sterile. The cold did not kill the pistillate parts of the flowers and, as the heads emerged from the sheath, Suneson found that the tissues which ordinarily

protect the florets from outside pollen, now left them open. Thus it was easy to dust the emasculated head with foreign pollen and so make a quick and easy crossing. Tests of seed developed in this way proved that the crosses were true hybrids and that the cold treatment had, in fact, prevented self-pollination. The tests indicated some varietal differences in response to the frosting, but all the varieties tested were rendered sterile by exposure to cold.

By making crosses in this relatively quick and easy way, it may be possible, says the bureau, to make more rapid progress in developing new wheat varieties with specific desirable qualities.

The Canadian wheat board will pay back to the Dominion treasury \$8,000,000, Hon. Charles Dunning told the Dominion House Feb. 25 in his budget speech. The minister said this would represent "an offset in part to the disbursement of \$15,856,000 which we provided for last year to recoup the board for the net liability assumed when it acquired the wheat and wheat contract held by Canadian Co-operative Wheat Producers Limited in connection with the 1930 wheat pool and stabilization account.

Europe Must Have Our Wheat—Allowing 184 million bushels for shipments during the rest of the season up to August 1, and assuming that minor countries furnish 20 million bushels, there would be 164 million bushels to be supplied mainly by Canada, Argentina, and Australia. If they shipped the full amount they would have left a combined carryover or export surplus of about 66 million bushels on August 1. This would compare with about 241 million bushels on August 1 last year. Their smallest stocks on the corresponding date in the last 15 years totalled 121 million bushels in 1923.—Gilbert Gusler, statistician Millers National Federation.

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St. Louis, Missouri

Commercial Seed Corn Drying

The presence of moisture in the kernel of seed corn encourages the development of acidity destructive to the vitality of the germ. Exposure to low temperature for a single day will kill seed corn containing much moisture.

After experience with various methods of drying corn the trade has centered on the Wisconsin type of seed corn drier as most satisfactory. Many of these driers are said to have been constructed the past season, each with a capacity from a few hundred to 15,000 or more bushels.

F. W. Duffee of the agricultural engineering department of the College of Agriculture, Madison, Wis., speaking before agricultural engineers at Chicago recently, gave a description of the bin method of seed corn drying, from which the following is reproduced:

The bin method of drying is intended for those who make a business of producing seed corn. It is not practicable for the farmer who produces seed corn only for himself.

Each of the bin driers in Wisconsin is completely housed. In most cases the bins, fans, furnaces, and other equipment are all in one building. Some have the fan and furnace in the basement. Others have all equipment on the same floor.

The most satisfactory arrangement is two rows of bins with an alley three feet wide between them. This alley receives the heated air from the fan and connects with the top and bottom of each bin. In this way the heated air can be conveyed to any bin as desired and by means of dampers the direction of the air in any bin can be controlled.

The most satisfactorily arranged alley is one with two compartments, one at the top and one at the bottom. This is accomplished by means of a solid partition running lengthwise of the alley one-half way between the top and bottom.

In the back wall of the bin, connecting with the alley, there are two dampers; one at the bottom and one at the top; on the outside is a door for loading and unloading. The slatted false bottom supports the corn and allows the air to flow underneath. It is placed from 12 to 18 inches from the floor of the bin. It should be removable so that the bins may be cleaned out. In a large bin, it is necessary to make the false bottom in sections; otherwise, its removal is difficult. It is made of 1 x 4 slats placed edgewise about one inch apart. These slats should be held firmly in position and well supported by cleats at both ends, and also by cross cleats on the bottom.

The loading doors should be not less than two feet wide and should extend the full length of the bin from the sill to the plate. In most driers these doors are made in sections, each 12 to 18 inches wide. The sections are made of double ply with both the ends and sides overlapping so that when in position the doors are nearly air tight and any section can be removed without disturbing the other sections. Any convenient arrangement of doors which will prevent air leakage is satisfactory.

Size of Bins. So long as the bins are the proper height, they may be made any length and width desired. In driers of small capacity, the bins are usually small. In those driers which have a capacity of 10,000 bus. or more the bins are comparatively large. Experience indicates that the most satisfactory depth of corn is from six to seven feet. The greater the depth, so long as satisfactory drying is obtained, the less floor space is necessary.

Size and Number of Bins Necessary for Driers of Various Capacities

Season output bushels	Bins required	Size of bins, inside measurement	Width feet	Depth feet	Height feet
500	2	4	5	9	
1,000	4	4	5	9	
2,000	8	4	5	9	
4,000	10	5	6	9	
6,000	14	5	6	9	
8,000	20	5	6	9	
10,000	18	6	8	9	

Since the top of the false bottom is fully 18 inches above the floor and since there is fully 6 inches of unfilled space at the top, a bin 9 feet high will hold a 7 foot depth of corn. Three sizes of bins, based on inside measurements are suggested:

- (1) For a small capacity drier, the bins should be 4 feet wide, 5 feet deep and 9 feet high;
- (2) for medium capacity drier, the bins should be 5 feet wide, 6 feet deep and 9 feet high;
- (3) for large capacity drier, the bins should be 6 feet wide, 8 feet deep and 9 feet high.

(3) for large capacity drier, the bins should be 6 feet wide, 8 feet deep and 9 feet high.

The common round or residence type of furnace is suitable for driers which have a capacity of less than 10,000 bus. For driers of 10,000 bus. or more the horizontal type of furnace commonly used in school houses and churches is preferable.

Size of Residence Type of Hot Air Furnaces Needed

Number of bins	Furnace Requirement	
	Number of furnaces	Diameter of fire box in inches
2	1	21
4	1	27
8	1	30
10	2	30
14	3	30
20	4	30
18	6	30

Any material that will provide reasonably air tight bins may be used. Some driers are built entirely of lumber, some of hollow tile, others of lumber and mineral plaster board.

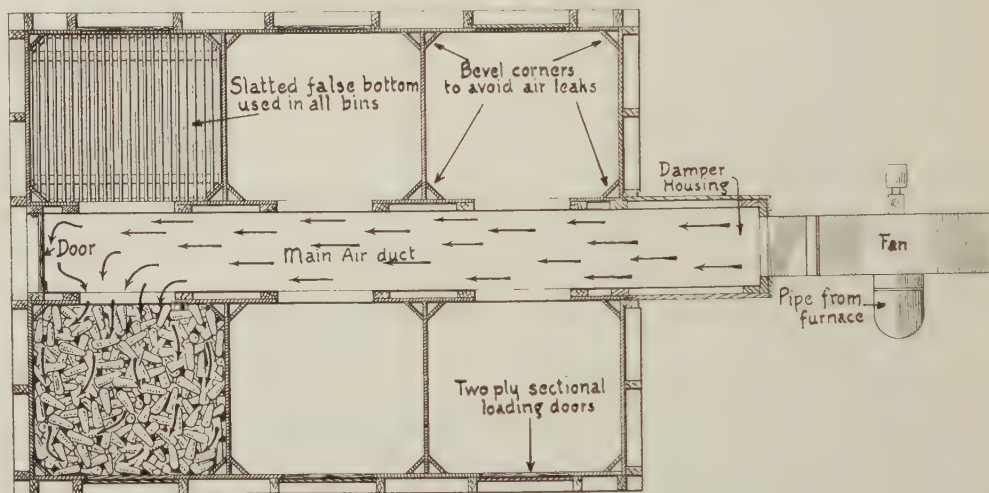
If lumber is used, the frame work may be made of 2 x 4's and the siding of narrow, good grade matched lumber. Wide boards should not be used as they will shrink and produce cracks. A good grade of medium width flooring is suggested. It is important that the siding be thoroughly cured.

The only kind of fan suitable for bin drying is the multivane blower type. This fan is constructed for blowing air under conditions where there is considerable resistance to the flow of air.

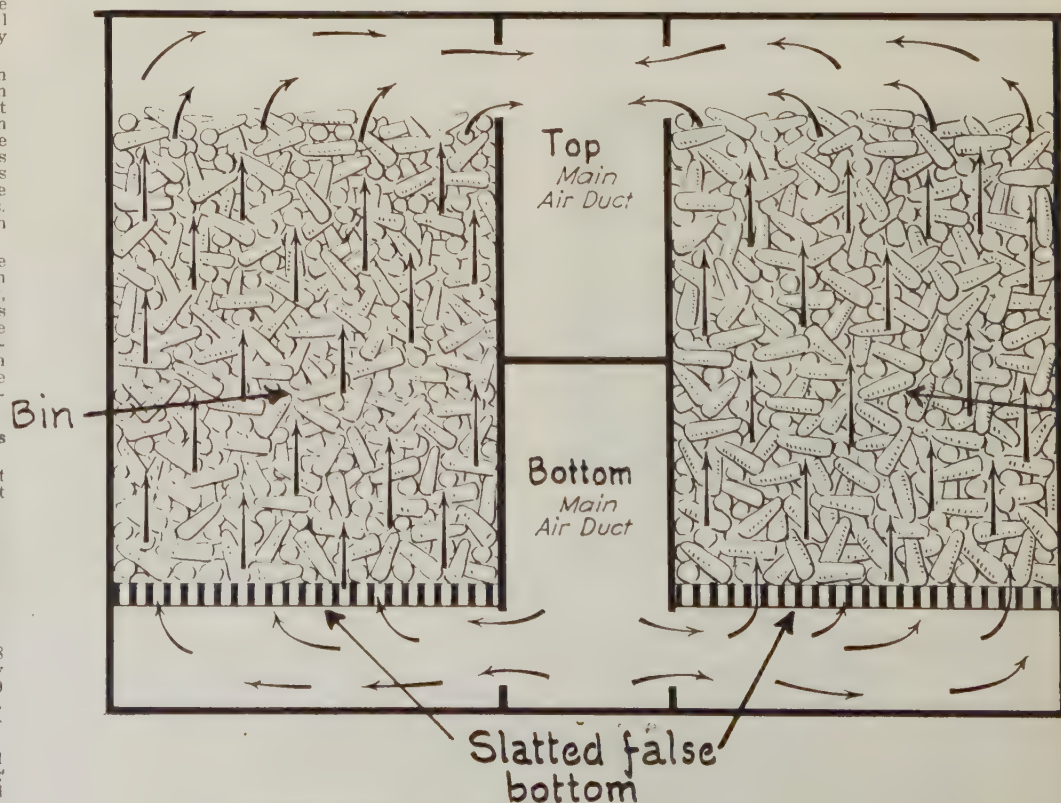
Capacity of drier in bu.	Approximate Horse Power for Operating Fans	Fan capacity in cubic ft. per minute at 1 inch static pressure	Approximate H.P.
500	2	3,000	
1,000	3	6,000	
2,000	5	12,000	
4,000	9	20,000	
6,000	12	30,000	
8,000	15	40,000	
10,000	20	60,000	

Husked corn is delivered to the drier in the ear, and is shoveled into the bins just as corn would be unloaded into a crib. The depth of the corn in the bins is from six to seven feet. Warm air is forced thru the bins from top to bottom for twelve hours and is then reversed and forced thru in the opposite direction for twelve hours. The total time for curing varies from 72 to 96 hours. The air is heated to 100° F. and the corn is dried to around 13 per cent moisture.

When the damper is set so the air goes into



Ground Plan of Wisconsin Type Seed Corn Drier



Cross Section Thru Bins of Wisconsin Style Seed Corn Drier.

the bottom compartment of the alley, it flows from the alley thru the opening at the bottom of each bin, up thru the corn, back into the top compartment and then out thru a door at the end of the alley. By reversing the flap damper and adjusting the doors at the end of the alley, the air from the fan will enter the top compartment, flow thru the opening at the top of each bin, down thru the corn and back into the bottom compartment.

After the heated air passes thru the corn and back into one or the other compartment, it flows out thru an opening in front of the alley, and thence to the furnace or fan for re-circulating. Since the heated air is forced thru the corn at a rate that does not allow it to make full use of its drying capacity, it is very important to re-circulate about 75 per cent of the used air. By doing this, the fuel bill can be reduced 50 per cent. The better plan is to allow the used air to flow out into the room near the fan or the furnace. This is necessary because at least 25 per cent of the air to be heated will be fresh air from the outside. The necessary fresh air can be provided by leaving open sufficient windows or doors in the room where the furnace or fan is located. Instruments for regulating the humidity of the air are not necessary. By frequently observing whether or not there is any condensation on the windows, the moisture of the air can be approximately determined. When a proper mixture is being used, there will be no condensation. If condensation occurs, more fresh air should be taken in from the outside.

On the inside of each bin, thru the wall which separates the bin from the alley, openings are made both at the top and at the bottom. These dampers allow the air to flow from the alley into the top or bottom of each bin. The size of each opening varies with the size of the bin, but is usually eight inches high and from two to three feet wide. When the bin is full of corn and drying is being done, neither opening is closed. In order to load or unload a bin, there should be an arrangement to close both openings in order to avoid escape of warm air or the necessity of stopping the fan. This can be done by a metal sliding damper working in a metal groove. The dampers for both the bottom and top opening may be connected so that both can be opened or closed at the same time. By connecting a chain at the top of the sliding damper and running this over the top of the bin on small pulleys, the dampers can be opened and closed from the front of the bin.

The fuel cost of drying seed corn varies from about 3c to 5c per bushel under ordinary, good conditions of operation and good management. It is assumed that the average season for drying is around 40 days; that each bin may be re-loaded six times in each drying season, and that 3.5 cubic feet of freshly harvested ear corn will produce one bushel of dried shelled corn.

Ten of these driers were built in the state of Indiana this year. This increased use in states farther south, where ordinarily less difficulty is experienced in drying corn, is largely due to the advent of hybrid seed corn, where the large investment in crops of this kind makes it absolutely necessary to have a positive method of drying, which will eliminate all danger of loss from early frosts.

New Oats and Barley Varieties

New oats and barley varieties recently developed by plant breeders of the corn belt experiment stations have been furnished to 31 Indiana counties by the Agronomy Extension Department of Purdue University for planting in 48 variety demonstrations in co-operation with county agents. All of these oats and barley varieties have been tested out by the Agronomy Department on the Soils and Crops Experiment Farm as well as on the outlying Purdue experiment fields where they have shown outstanding merit.

These new varieties will be planted on farms where they can be compared with the demonstrator's own variety as well as other local varieties. At field meetings to be held prior to harvest at each of the demonstrations, the different varieties will be observed and compared on the basis of earliness, stiffness of straw and indications of yielding ability. Some of these newer varieties are outyielding some of those commonly grown by 15 to 25 per cent, and in addition have greater stiffness of straw that greatly reduces losses in harvest due to lodging.

The oats varieties being used in these demonstrations for the two oats growing regions of the State are as follows: Northern and Central Indiana, Gopher, Cartier, Wayne, Alaska, Liberty Hulless and New Victory; for southern Indiana, Columbia, Cartier and Gopher. The barley varieties sent include Alpha, Velvet, Wisconsin No. 37 and No. 38.

According to experiments conducted for the past several years on the Soils and Crops Farm near Lafayette the Gopher has been a high yielding, early variety of oats best adapted to rich soils, where lodging is a problem. The Wayne is another early, mid-season oat variety of much promise for the northern half of the State. It is a stiff stalked variety that makes more growth and ripens slightly later than the Gopher.

Columbia, a grey oat developed by the Missouri Experiment Station has become popular in all sections of southern Indiana where farmers have seen it grow in demonstrations. From a supply of 1,000 bushels of certified Columbia oats brought into Knox, Martin, Lawrence and Shelby Counties in 1935, much of which has been used for seed in southern Indiana counties.

Strains of Hardy Oats

At least six oat strains apparently equal or exceed in hardiness Winter Turf, which until recently has been regarded as the most winter hardy of all. Winter Turf is known also as Gray Winter, Virginia Gray and by other names.

Strains tested for the full 10 years, and which show superior hardiness, are Hairy Culberson, Bicknell, Culberson, and Fulghum (winter type) C. I. 2499. The tests showed Custis and Tech also were slightly superior. Of the strains grown for less than 10 years, Tennessee Selection No. 090 ranked first.

Altho the discovery that certain oat strains exceed Winter Turf in hardiness is noteworthy, the nature and similarity of origin of these harder strains is of greater interest. All trace more or less directly to Red Rustproof or some similar variety of red oats, the type grown almost exclusively in the southern United States, yet all have characteristics suggestive of oat varieties of the common oat type grown most generally in the northern part of the country.

The Hairy Culberson strain was originated by T. R. Stanton of the Bureau of Plant Industry, as a re-selection from a strain of Culberson selected by C. W. Warburton, now Director of Extension of the Department of Agriculture. The original Culberson from which Dr. Warburton made his selection was received from the North Carolina Experiment Station in 1904. It came from a mass selection from Red Rustproof altho both the Hairy Culberson and the Culberson differ widely from the parent stock. Both are considered as belonging to the common or northern oat type although they originated from Red Rustproof, classed as a red or southern oat.

The origin of Bicknell is similar to that of Culberson. The selection was made by Mr. Stanton at the Arlington Experiment Farm from a variety received in 1902 from F. W. Bicknell, then U. S. Consul at Buenos Aires, Argentina. Most oats grown in South America are of the same type as Red Rustproof. Bicknell, like Culberson, is considered as belonging to the northern oat type although very likely developed from an oat of the southern type.

Mr. Stanton originated the Fulghum C. I. 2499 by selection from Fulghum C. I. No. 699, which was received from the Alabama Experiment Station in 1912. The original Fulghum oat resulted as a selection made by J. A. Fulghum, a farmer living near Augusta, Ga., from a field of Appler, a Red Rustproof strain. Tennessee Selection 090 is a re-selection from Fulghum C. I. 2499 made by Mr. N. I. Hancock of the Tennessee Experiment Station. This strain has been the most hardy of all Fulghums tested and possibly is the equal of Hairy Culberson in hardiness.

Tech is a black-kerneled oat selected from Culberson at the Virginia Experiment Station by T. B. Hutcheson, and Custis was originated by Mr. Stanton at Arlington Experiment Farm from a cross between Winter Turf and Aurora. Dr. Warburton selected Aurora from Appler.

In this way all oat strains showing exceptional hardiness trace back to Red Rustproof or similar variety. Several such strains come under the classification of *Avena sativa* or the northern oat group although their parentage traces back to Red Rustproof belonging to *Avena byzantina* the southern oat type of which most varieties lack unusual hardiness.

Ottawa, Ont.—How much did the Canadian Wheat Board pay for carrying charges on 1935 crop wheat in country elevators, who received the money, and how much was paid to the individual elevator companies, asked Gordon Ross (Liberal, Moose Jaw) in House proceedings on Mar. 5.

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Feedstuffs

Washington, D. C.—Production of distillers dried grains totaled 13,750 tons in February; shipments, 14,110 tons.

Rolfe, Ia.—M. & J. R. Hakes and Sargent & Co. co-operated to entertain farmers and feed buyers at the Pla-Mor Feb. 26, serving a dinner and talking about feeds.

Kansas City, Mo.—A round lot of elevator dust recently sold by a Kansas City elevator, brought \$27 a ton for scattered monthly shipment between March and May.

Decatur, Ill.—Oats can be classified with the "forgotten man." Altho the cheapest feed that can be had, the more prices decline the less interest is shown, and demand is very disappointing.—Baldwin Elevator Co.

St. Louis, Mo.—February receipts of kafir were 7,000 bus. and of hay 772 tons, compared with kafir 16,800 bus. and hay 324 tons in February, 1936. February shipments of hay were 396 tons compared with 132 tons in February, 1936.

Syracuse, N. Y.—The Eastern Federation of Feed Merchants, in recent convention, voted to apply for affiliation with the Grain & Feed Dealers National Ass'n. Fourteen other state and regional grain and feed associations now are affiliated with the National.

Washington, D. C.—Alfalfa meal production in February was 27,290 tons, compared with 16,740 tons a year ago. Aggregate production June to February, inclusive, stands at 257,170 tons, compared with 170,930 tons during the same nine months a year ago.—Buro of Agricultural Economics.

Boston, Mass.—February receipts of mill-feed were 1,017 tons compared with 609 tons in February, 1936; February shipments were 20 tons compared with 20 tons in February, 1936. Receipts of hay for the same month were 682 tons compared with 451 tons in February, 1936, and shipments were 150 tons.—L. W. DePass, sec'y Grain & Flour Exchange.

Feed Prices

The following table shows the closing bid price each week for May futures of standard bran and gray shorts, spot cottonseed meal, soybean oil meal and No. 1 fine ground alfalfa meal, in dollars per ton and No. 2 yellow corn and No. 2 yellow soybeans in cents per bushel:

	Minneapolis		Kansas City	
	Bran	Midds.	Bran	Shorts
Dec. 12.....	33.00	34.00	25.65	32.15
Jan. 9.....	34.00	34.00	27.55	33.50
Jan. 30.....	33.00	33.00	24.50	32.00
Feb. 20.....	30.50	32.50	.....	30.50
Feb. 27.....	29.50	32.00	23.25	30.40
Mar. 6.....	30.50	32.50	24.00	31.25
Mar. 13.....	33.00	34.50	24.55	31.25
Mar. 20.....	34.00	36.50	26.90	33.50

	St. Louis		Chicago	
	Bran	Shorts	Beans	Soy-Meal
Dec. 12.....	27.85	34.00	144	41.40
Jan. 9.....	29.25	35.10	161 1/4	42.90
Jan. 30.....	27.50	33.25	159 3/4	42.20
Feb. 20.....	25.50	32.40	159 3/4	41.20
Feb. 27.....	25.00	31.75	156	41.20
Mar. 6.....	26.10	32.25	155 3/4	40.20
Mar. 13.....	26.50	33.00	156 3/4	40.20
Mar. 20.....	28.90	35.00	155 3/4	39.70

	Cottonseed Meal		Kansas City		Chicago
	Ft. Worth	Memphis	City	Alfalfa	
Dec. 12.....	37.00	34.50	24.00	.....	112
Jan. 9.....	38.00	35.00	24.00	.....	113 1/2
Jan. 30.....	40.00	34.00	24.50	.....	111 3/4
Feb. 20.....	.....	33.50	24.50	.....	112 3/4
Feb. 27.....	41.00	32.00	.....	.....	112 3/4
Mar. 6.....	40.00	33.50	24.00	.....	114 3/4
Mar. 13.....	.....	34.00	24.00	.....	114 3/4
Mar. 20.....	41.00	35.00	23.50	.....	117

Calcium gluconate is used to treat calcium deficiency in humans and animals.

Dr. J. E. Hunter, professor of Agricultural and Biological Chemistry at Pennsylvania State College and noted authority in the field of nutrition, will become director of biological research for Allied Mills, Inc. Dr. Hunter is chairman of the Nutrition Com'te of the Northeastern Poultry Producers Council and is widely known thruout the country because of his extensive investigations and writings pertaining to research work on Vitamins A, D and G. He is an active worker in the American Poultry Science Ass'n and the American Institute of Nutrition.

Des Moines Soybean Meeting

Approximately 60 delegates associated with soybean buying or processing met at Des Moines, Ia., Mar. 4, for a conference on soybean production, processing, and feeding problems, under sponsorship of the Des Moines Chamber of Commerce.

Iowa will diversify her production of soybeans instead of confining their growing to the southeastern corner of the state, said Prof. H. D. Hughes, Iowa State College, in the opening address. "Soybeans will have to take their place in the crop rotation program as a cash crop thruout much of Iowa, if we are to have a material gain in acreage."

Prof. E. L. Quaife reviewed experiments at the State College, and at the experiment station with feeding soybean meal to livestock. Hogs may not be fed whole soybeans without decreasing the value of the meat, tho dairy cows eat whole soybeans, apparently without disparaging results.

A gross processing capacity for 6,375,000 tons annually was represented at the meeting with delegates from plants at Des Moines, Centerville, Waterloo, Cedar Rapids, Clinton, Fort Dodge, Chicago and Minneapolis. These delegates pointed out that Iowa's comparatively short crop of 2,300,000 bus. last year did not begin to fill requirements.

Copeland Bill Strengthens Food and Drugs Act

Without roll call and without a record vote the Senate passed the Copeland Bill S.5, after two days' debate, on Mar. 9. Senator Moore, New Jersey, offering a substitute measure, failed to receive support.

The Copeland bill strengthens the food and drugs act by multiple seizure clauses, and heavy penalties for misbranding of food or drugs. Misbranding was originally defined as offering for sale a product with a label "false or misleading in any material particular." The amended act eliminates the word "material."

The bill now moves to the House, where Representative Coffee, of Washington, has presented H.R.5286 to create a consumers' buro to administer a new food and drug act. Proposed for the Buro are directors of law, publicity, registration, advertising, scientific research, analysis, and health education. It would require all proprietary products distributed interstate to be registered, application for registry to be accompanied by formula, exact text of any court or federal agency order regarding the product, and names of all technicians supervising manufacture. Registration might be denied for any of a number of reasons.

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John Lehmann, Everett, Wash., Re-elected Pres. Pacific N-W. Feed Ass'n.

Fire in Soybean Meal Bin

Soybean oil meal falls within the class of porous combustible substances that become heated thru the oxygenation of oil with which they may be impregnated. In small quantities the heat is radiated and conducted away; but in large, compact masses radiation is prevented and the interior sometimes rises to the temperature of ignition, resulting in what is popularly known as spontaneous combustion.

A few weeks after a new continuous process oil expeller system was installed in a soybean oil mill of Spencer Kellogg & Son at Des Moines, Ia., fire was discovered in the bin in which the cake was stored. The cracked beans are heated in a steam drier before the oil is expelled and when the cake comes from the expeller in small pieces about $\frac{3}{8}$ inch thick it is hot, about 160 degrees F. at the elevator head at top of storage tanks. It contains a little oil and less than 3 per cent moisture.

The steel storage tank had some crevices at bottom letting in enough air to support combustion, and a bottom outlet; and was open at top. The tank was 25 ft. in diameter and 50 ft. high, containing 350 tons of bean cake. About one-third of the contents was withdrawn from the smoldering tank before the work became too dangerous.

Extinguishing the fire presented great difficulty since water trickling into fire pockets of the resulting doughy mass might generate violent steam explosions.

The use of carbon dioxide was the most practical way to smother the fire and cool off the contents; but when tried the crevices and open top allowed the gas to escape when at different times tons of dry ice was placed on top or shoved into the tank.

After the use of dry ice was discontinued a hole was cut in the side of the tank thru which to remove the contents, but the clinker was so heavy no cake could be removed. On the opposite side of the tank a hole was started by drilling, but fire behind compelled covering the opening with a larger plate. While the tank was sealed the fire continued to burn slowly.

After 46 days an explosion of gas blew a jagged hole in the top of the tank and firemen took advantage of the opportunity to pour water from a hose line thru the opening. Some steam escaped but the fire gradually died down, and three hours later it was pronounced "out."

On account of the crevices in the tank a much larger quantity of carbon dioxide dry ice or liquid was required to cool off the contents in the opinion of A. J. Cordrey of the Liquid

Carbonic Co., who suggested the tapping of six $1\frac{1}{4}$ inch holes around the tank connected by piping to 15 cylinders of liquid CO₂, and when emptied to hook on 30 more cylinders of the liquid; which, expanding from high pressure just within the tank walls, would have the desired refrigerating effect, using perhaps 75 50-lb. cylinders of gas.

Under normal conditions, Mr. Cordrey states, a 20 per cent CO₂ gas concentration is sufficient to smother and stop combustion, but in a product of this kind it is doubtful that percentages of CO₂ less than 50 per cent would be effective. The loss was at least \$15,000.

Flood Wheat

Fifteen carloads of wheat that had spent many days under flood waters in the Ohio river valley moved into Buffalo late last month for drying in hope of salvaging for poultry or cattle feed at least a portion of the water-soaked grain.

The partly frozen cargoes bulged the boards of the cars. Water seeped from the cracks, but scoopers found shovels and pickaxes necessary to break out the loads. Some of the grain was heating and sprouted. Samples showed 50% moisture.

New Feed Trade Marks

The following trade marks have recently been filed:

Vimpep Foods, Inc., Cambridge, Md., No. 387,759, "Play Boy" for canned dog food.

Farallone Packing Co., San Francisco, Cal. No. 373,564, "Farallone," for fish meal for poultry and livestock food.

Vimpep Foods, Inc., Cambridge, Md., No. 387,446, "Always on Top," for canned food for dogs and other carnivorous animals.

National Coast Products Corp., Swedesboro, N. J., No. 386,902, "Blue Plate," with a picture of a dog eating out of a plate, for canned dog and cat food.

Lucius P. Cook, doing business as L. P. Cook, Memphis, Tenn., No. 385,832, "Ole Miss," and a picture of a hen's head, dressed up with spectacles and sunbonnet, for stock and poultry feed.

Sperry Flour Co., San Francisco, Cal., No. 372,438, "Nibs," for milled grain products and preparations thereof, particularly for poultry and livestock food, including food for cattle, sheep and rabbits.

Meal Consumption Controls Soybean Prices

I. C. Bradley, Taylorville, Ill., pres. of the National Soybean Processors Ass'n, speaking before the Midwestern Conference of Agriculture, Industry & Science, at Omaha, Mar. 10, said:

"Of 600,000 tons of soybean oil meal produced last crop year, over 90 per cent went into stock feed channels. Of 185,500,000 pounds of soybean oil sold, 85 per cent went into the edible field and 15 per cent into the industrial field.

"So while multiple uses will continue to be found through the determined unselfish cooperation of agriculture, industry and chemistry, we must for a long time depend on the two foregoing major fields for our outlets.

"Large funds are being spent in developing various phases of soybeans and evolving new products, the future importance of which must yet be proved. Of their merit there can be little question. As to when new products will absorb a substantial part of total production, however, remains problematical. Meantime we must depend upon stock feed consuming channels for the meal, and largely upon the edible field for the consumption of oil."

Washington, D. C.—A feed situation unfavorable to poultrymen is causing a reduction in the 1937 hatch compared with 1936, an increased seasonal decline in the size of farm laying flocks, and a less than normal seasonal decline in farm egg prices.—Buro of Agricultural Economics.

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Economical Use of Milk in Poultry Ration

By C. W. SIEVERT, Chicago, before Pennsylvania State Poultry Ass'n

In unpublished experimental work, a ration containing no milk, but otherwise as good as it is possible to make, produced eggs having a hatchability of approximately 65%. With the ration containing milk, hatchability up to approximately 80% was obtained. But 2½% dry skim milk (all mash basis) consistently produced 10% greater hatchability than when no milk was used. Even half this amount of milk has a definite effect but not as definite an effect as 2½%, total ration basis. Larger amounts of milk raise the hatchability somewhat. In the regular type of mash 5% of dry skim milk is really the minimum amount that will produce acceptable results. This is only true when the mash already contains 5% of alfalfa and sufficient vitamin A and D and also the proper calcium and phosphorous amounts.

On the basis of producing livable chicks, if eggs of 65% hatchability are worth 40c doz., what are eggs worth that have a hatchability of 75% or 80%? Ordinary arithmetic shows that eggs of 75% hatchability would then be worth 46c doz., and those of 80% hatchability would be worth 49c doz. How much dry milk can you afford to put in mash feed in order to make 40c eggs worth 49c? If your birds are laying around 180 eggs a year, then 1 lb. of feed (total ration basis) will produce two eggs. If your birds are laying only 80 eggs a year, then 1 lb. of feed will produce about one egg. With birds producing 140 to 150 eggs a year, 8 lbs of feed will be required per dozen of eggs. If 8 lbs. of feed produce 40c worth of eggs, then 1 lb. of feed will produce 5c worth of eggs. At present prices a pound of high grade all mash feed containing no milk will cost about 2½c. If you can produce eggs of high hatchability, then they are worth 49c doz. Eight pounds of feed making that dozen of eggs will be worth approximately 6c lb. instead of 5c, as with the eggs of lower hatchability. Such a feed making 6c worth of eggs to the pound should surely be worth 3c in actual cost. How much milk will raise the cost of the feed ½c lb. or 50c per bag? That depends somewhat on the price of dry skim milk. If ordinary feed ingredients are worth 2½c lb. and dry skim milk is worth 8c lb. then the increase in cost would be 30c per 100-lb. bag when 5% of dry skim milk is present. If the milk is worth 10c lb., then the increase is 40c, and if the milk is worth 12c lb. then the increase in cost is 50c per 100-lb. bag, or ½c lb. Remember that the cost of feed was figured above as being 50% of the worth of the eggs. Ordinarily feed costs are considered to represent 60% of the cost of producing eggs. Also remember that we are figuring 5% of milk on the all mash basis. This is equivalent to 10% milk in the ordinary mash which is fed with its own weight of scratch feed.

Is it, therefore, not very poor economy to use no milk or just a small amount of milk in feeding for hatching eggs? On the all mash basis 2½% should be the absolute minimum and that is equivalent to 5% in the ordinary type mash. Twice this amount will more than pay for itself. Going back to one definition of economy, "management without loss or waste, as a housekeeper accustomed to economy, not parsimony," we find that this definition exactly fits what happens when hatchable eggs are wanted. Economy but not parsimony is the answer.

There is probably no question about the use of milk in chick starting ration. Everyone insists that milk be a part of the starting ration of a chick. We can probably all remember when that "wisecrack" about God Almighty

furnishing a hen with an udder if a chick was supposed to have milk was considered to be quite funny. Then again there was the amateur poultryman who complained about losing the chicks he had bought from a dealer and tried to explain his lack of feeding them because he thought the old hen would furnish them all the milk they needed. I have looked over the recommendations of practically every experiment station in the country and the use of milk in the starting ration for chicks is universal.

Going back to the recent work by Hunt, Record and Bethke which was previously mentioned, the chicks fed the ration containing 5% alfalfa leaf meal weighed 359 grams in eight weeks. Those fed the ration containing the same quantity of alfalfa leaf meal and 2½% of dry skim milk weighed 492 grams. Those fed that amount of alfalfa leaf meal plus 5% of dry skim milk weighed 519 grams. All these rations contained the same amount of total protein and all of them represent the total rations of the chicks. On the basis of gain in weight, there is no question regarding the feeds to use.

In the same experiment the chicks at the end of 14 weeks still showed about the same relationship. At the end of 22 weeks those receiving only 2½% of milk were just a little heavier than those getting 5% and both of these lots were quite a bit heavier than those receiving no milk. At the end of 53 weeks the birds receiving no milk were definitely lighter in weight, even though they had produced only about one-third as many eggs as those getting 5% of milk in the ration.

Another experiment was mentioned previously, one which has been in progress for more than a year. In that experiment the growth of the chicks and also the amount of feed necessary to produce the growth was measured. It took almost 4½ lbs. of feed per pound of chick during the first 12 weeks when that feed did not contain milk. With the 5% milk in the all mash ration only about four and one tenth pounds of feed was needed to make 1 lb. of gain. Furthermore, the chicks receiving the milk weighed almost 2 lbs. each and those not getting milk weighed 1¼ lbs. Figuring the cost of milk at 8c lb. and the other feed ingredients at the market, an all mash ration containing 5% of milk produced 1 lb. of gain at .1c per lb. less. In addition, the chicks getting 5% dry skim milk weighed more and looked better.

What happens at 24 weeks of age when these birds are ready to go into the laying house. At that time the birds getting no milk had gained about 3.2 lbs., while those getting milk had gained about 3½ lbs. It took 7.2 lbs. of feed to grow a pound of pullet in the no milk ration, but where 5% milk was used in the all mash ration it only required 6½ lbs. of feed to do the same job. In other words, the efficiency was 10% greater and consequently the milk feed could be worth 10% more than the non-milk feed. Other amounts of milk

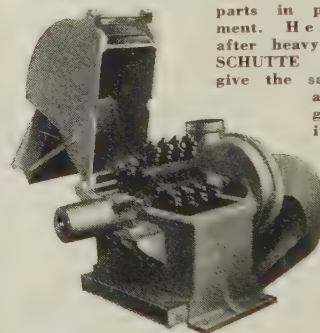
less than 5% all mash basis produced results intermediate between the results above noted. Larger amounts of milk produced slightly better results, but not more economical from the dollars and cents standpoint. On the other hand, the addition of a very small amount of milk produced no appreciably better results than no milk at all. This again shows that a feed mixture containing only a small percentage of milk is not sound in principle. One should use enough to do some good—not too much—but definitely enough to do some good. Trying to fool oneself with 1% or less is a sheer waste of money.

Successful control of the sex of baby chicks before they are hatched is claimed by a Japanese college professor, who injects female hormones into hatching eggs at a cost of about one-half cent per egg.

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Suggestions for Vitamin D Supplements

Research has finally determined with some degree of accuracy the necessary level of vitamin D in the rations of both growing chicks and laying hens and pullets. It is therefore more definite now to express the requirements of vitamin D in terms of units than in volume or amount of oil as has been the case formerly. This is especially true in dealing with standardized products. If oil companies will express vitamin D potency in their products in terms of U.S.P. units of vitamin D, feed companies and poultrymen can prepare their rations with a much greater certainty of protection against rickets than has been the case in the past.

Vitamin A requirements have not yet been standardized, but indications show that layers need at least about 400 U.S.P. vitamin A units per 100 grams of feed, an approximate daily ration. The following are the recommendations of our New England Colleges' conference with respect to vitamin D supplements:

Chicks	Formula	Layers
200 lbs.	Yellow corn meal.....	200 lbs.
100 lbs.	Wheat bran.....	100 lbs.
100 lbs.	Wheat flour middlings.....	100 lbs.
100 lbs.	Ground oats.....	100 lbs.
50 lbs.	Meat scraps.....	50 lbs.
50 lbs.	Dried skim milk.....	25 lbs.
25 lbs.	Fish meal.....	25 lbs.
25 lbs.	Alfalfa leaf meal.....	25 lbs.
15 lbs.	Calcium carbonate.....	15 lbs.
5 lbs.	Common salt.....	5 lbs.
7 lbs.	Oil—85 U.S.P. units of D per gram	14 lbs.

677

659

1. The above recommendations have to do with tested cod liver oil, sardine oil, 85 U.S.P. vitamin D units per gram, or the equivalent of the cod liver oil vitamin A and D concentrates; or the vitamin D supplement should be used as directed by manufacturers.

2. If the vitamin D supplement is of the potency stipulated, the feed will contain 400 U.S.P. vitamin D units per pound for chicks, and 820 units per pound for layers; or 88 vitamin D units per 100 grams of feed for chicks and 180 units for layers. Each 100-lb. bag of mash, therefore, for chicks, will contain 40,000 units and for layers 82,000 units.

3. When the above mixtures are fed on a 50-50 basis with grain the intake of vitamin D for chicks is 44 units and for layers 90 units per 100 grams of feed. These are the approximate standard requirements.

4. When no grain is fed with the above mixtures only half the amounts of oil specified may be used.

5. If the vitamin D supplement varies from 85 U.S.P. units per gram, the amounts used must be adjusted to meet the requirements laid

down. (85 U.S.P. units are equivalent to 119 International Vitamin D units.)—Massachusetts State College.

Processing Temperature Affects Poultry Feeding Value of Soybean Meal

High temperature expeller soybean oil meal (processed at 140-150° C. for 2½ minutes), medium and high temperature hydraulic soybean oil meal (cooked at 105 and 121° C. for 90 minutes), and solvent extracted soybean oil meal (cooked at 98° C. for 15 minutes) resulted in chicks weighing about twice as much, with less feed required per unit of gain, as the chicks fed ground raw soybeans and low temperature expeller soybean oil meal (processed at 105° C. for 2 minutes) in feeding trials conducted for eight weeks by J. W. Hayward, J. G. Halpin, C. E. Holmes, G. Bohstedt and E. B. Hart.

The medium and high temperature hydraulic soybean oil meals were superior, in growth produced and feed required, to the low temperature hydraulic soybean oil meal (cooked at 82° C. for 90 minutes). Low temperature hydraulic meal was not decidedly lacking in growth promoting properties as were the ground raw soybeans and low temperature expeller soybean oil meal.

Chicks fed a ration containing 16 parts soybean oil meal and minerals, or a combination consisting of 12 parts soybean oil meal, 2 parts meat scraps, and 2 parts dried milk plus minerals, did not equal in average weight at eight weeks or in feed required per unit of gain the chicks fed a protein supplement consisting of 8 parts meat scraps and 8 parts of dried milk, regardless of the soybean oil meal that was used.

As for the chicks fed the soybean oil meals which have been designated as properly heated, 12 parts soybean oil meal, 2 parts meat scraps, and 2 parts dried milk plus minerals was superior in results obtained in these eight-week feeding trials to 16 parts soybean oil meal plus mineral.

The combination of 12 parts high temperature expeller soybean oil meal, 2 parts meat scraps, and 2 parts dried milk plus minerals surpassed 16 parts of soybean oil meal plus minerals and approximately equalled the combination of 8 parts soybean oil meal, 4 parts meat scraps, and 4 parts dried milk plus minerals or the all animal protein supplement consisting of 8 parts meat scraps and 8 parts dried milk in weight of pullets and feed required per unit of gain at 20 weeks in two feeding trials. This combination of 12 parts high temperature expeller soybean oil meal, 2 parts meat scraps, and

2 parts dried milk plus minerals also proved highly efficient in comparison to other supplements tested in producing eggs in one 11-month trial reported for pullets.

Cornell University's agricultural department estimates bringing a chick to the laying stage requires 12 pounds of grain and 19 pounds of mash.

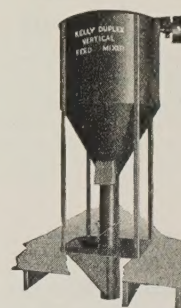
Urbana, Ill.—An "extract" from hybrid seed corn is the latest racket being worked on unsuspecting farmers at prices as high as \$12.50 a bottle, reports W. P. Flint, chief entomologist, University of Illinois. Purveyors of the worthless material instruct that it be sprayed on the seed 30 minutes before planting, and claim it will make open pollinated corn resist grasshoppers and chinch bugs. Elevator men approached with the product are advised to notify their nearest authorities.

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Typical Retraction of Head of Bird Suffering from Vitamin B Deficiency (Polyneuritis).

Effect of Packing House Byproducts on Eggs

An extensive study by H. W. Titus, T. C. Byerly, N. R. Ellis, and R. B. Nestler for the Bureau of Animal Industry, covered the effects of meat meal, meat-and-bone meal, beef scrap, blood meal, and stick, individually and in various combinations, on the production and hatchability of eggs.

In each test the material was fed at a 20 per cent level as a supplement to a basal ration of yellow corn, wheat bran, rolled oats, and alfalfa leaf meal.

In every case the egg production of birds on the byproducts rations was materially higher than for those on the basal diet, and in nearly all cases somewhat higher than that of birds receiving a meat-fish-milk supplement which was used as a positive check. In general, satisfactory hatchability was obtained from the eggs produced on the byproducts ration, ranging from 70 to 80 per cent in most cases. In a few instances decreased hatchability was encountered, apparently being closely associated with increased second-week embryonic mortality. Liquid stick and a mixture of blood meal and stick in the diet seemed to cause an increased embryonic mortality throughout the incubation period. Live weight gains, feed consumption, and egg size were generally satisfactory on byproducts rations. Within the range studied, cooking temperature (maximum of 200 deg. F.) and time of processing (maximum 8 hr.) had little effect on the quality of the meat scrap.

Water barrels for fire protection should be coated inside with asphalt paint and have a well fitting cover. Buckets are best placed in a box above the barrel upside down and protected against removal by light slats or screen wire.

Imports and Exports of Feeds

Imports and exports of feedstuffs during December and during the twelve months ending December, compared with the like periods of 1935, as reported by the Bureau of Foreign and Domestic Commerce, were as follows, in tons of 2,240 lbs., except where noted otherwise:

	IMPORTS		Year	
	1936	1935	1936	1935
Hay*	19,952	125	73,976	67,171
Cocoanut cake†	10,149,563	4,225,752	89,935,656	102,399,483
Soybean cake†	6,582,186	3,352,605	42,633,105	107,463,044
Cottonseed cake†	5,924,670	216,940	27,369,939	59,743,572
Linseed cake†	3,652,400	2,640,000	37,532,096	20,979,647
All other cake†	226,013	168,283	7,917,478	9,826,433
Wheat feeds	46,482	21,537	373,581	338,660
Tankage	2,917	3,080	48,163	30,851
Fish scrap	4,200	5,701	43,722	27,851
Beet pulp	7,967	2,119	38,297	29,652
	EXPORTS			
	1936	1935	1936	1935
Hay	52	182	2,161	2,718
Cottonseed cake	2	....	1,983	3,308
Linseed cake	22,257	25,042	176,041	193,729
Other oil cake	18	270	17,830	3,184
Cottonseed meal	141	1,234	4,127	3,367
Linseed meal	2,997	1,428	10,594	13,825
Other oil meal	1,068	3,997	26,099	17,526
Fish meal	149	2,041	4,431	21,858
Mixed dairy feeds	199	227	1,583	2,032
Mixed poultry feeds	97	80	1,662	1,476
Other mixed feeds	77	135	2,018	1,607
Other feed bran	431	644	9,018	7,371
Kafir, milo, bus.	....	....	2,148	4,412
Oyster shells	4,668	2,916	58,961	44,470

*2,000-lb. tons. †Pounds.

Minerals in Dairy Rations

By C. L. BLACKMAN, Ohio State University

Recent investigations have established the importance of mineral matter in the ration. So far as dairy cattle are concerned the minerals most likely to be deficient in the ration are lime, phosphorus, and common salt. In certain areas about the Great Lakes, in Montana, and eastern Washington there is a deficiency of iodine in the soil. In these localities calves may be born with enlarged glands of the throat (thyroid glands) and older animals sometimes develop like symptoms due to a lack of iodine.

Lime.—If proper care is taken in the selection of roughages, the lime requirement of most dairy cows will usually be satisfied, although in the case of extremely high producing cows on test, a little lime supplement may be desirable. Legume hays such as alfalfa, clover, soybean, etc., are relatively rich in lime, especially if grown on soils high in lime. Alfalfa, according to Henry and Morrison, contain about 40 pounds of lime (calcium oxide) per ton. According to the same authors, clover contains just a little less, and timothy only about one-eighth as much. Corn silage contains about the same amount of lime as timothy, but in view of the fact that silage is fed about three times as heavily as timothy, it adds considerable lime to the ration.

Investigations to date show that cows in heavy production after calving, lose lime even though legume roughages and lime supplements are added. However, during the latter part of the lactation period and while dry, the cow stores calcium rapidly if the proper feed is supplied. This is a good reason for the feeding of legume hays to dry cows.

Investigations at the Wisconsin Station show that if poor roughages are fed continually, poor and even premature calves are delivered. If these poor rations are supplemented with finely ground limestone, there is a marked improvement in the offspring. However, calves from cows fed in this manner are not as thrifty as calves from cows fed roughages naturally high in lime, such as clover and alfalfa hay.

It appears that all roughages grown on lime rich soils are superior to similar roughages grown on "acid" soils. It seems, then, in the long run, that the good agricultural practice of using lime on the land is the constructive solution to the lime deficiency problem in feeds. If only poor roughages are available it is probably well to add 1 or 2 per cent of finely ground limestone to the grain ration.

Phosphorus.—High protein concentrates are the principal carriers of phosphorus, although roughages, especially legumes, carry considerable amounts when grown on soils high in phosphorus. Cottonseed meal, wheat bran, linseed oil meal, in the order named, are the heaviest carriers of phosphorus, and many other common concentrates also contain it.

Wisconsin Station authorities state that when 20 per cent of the grain ration is made up of wheat bran, middlings, cottonseed meal, or linseed oil meal, there is probably plenty of phosphorus present. In some places in Wisconsin and Minnesota, there appears to be a great deficiency of phosphorus in roughages, so that cattle not receiving grains rich in phosphorus actually become sick and die. Six cows in Wisconsin afflicted in this way were given phosphorus-rich rations and recovered. A ration carrying 25 per cent of wheat bran and 5 per cent of oil meal was effective in correcting this deficiency.

A. E. Staley Mfg. Co. net profit for 1936 was \$1,460,568, against \$292,200 in 1935.

Grassland Farming to Affect Feed Buying

By J. W. BARTLETT, Professor of Dairy Husbandry New Jersey Exp. Sta., before Eastern Federation of Feed Merchants

Grassland farming means less plowing and less corn and other grains grown on our Northeastern farms. Some of you sell a large tonnage of poultry feeds, but generally speaking, the great bulk of animals to be fed in this territory are dairy cows.

We have shown and the federal Government and other state colleges have shown that cows will produce milk without any grain, but don't be alarmed—this will not become a practice in our market milk sections while the price of milk remains where it is, and it is too low now. The dairymen can still afford to feed grain and will feed grain. Therefore, grassland farming does not mean a turn-away from grain feeding. I feel that the farmers will have more money to buy grain. The feed man may sell a little different type of ration to the farmer who raises more feed units from grass and less from cultivated crops.

Now, when I say grass farming I mean a program which includes pasture improvement, hayland fertilization and grass ensilage. Our colleges are doing more research on this one subject today than almost anything else in feeding.

This new type of roughage feeding requires the attention of the feed merchant in several ways. In the first place; this new type of roughage will carry more protein than those previously fed. Thus we probably will find that lower protein grain rations will give good results. Secondly the feed man can give service to the dairyman by selling him molasses and in the third place the feed dealer may help conduct some educational work to induce the dairy farmer to use the right kind of fertilizer and the right amount of fertilizer on his grass lands.

It is quite possible that poultrymen will follow the grass ensilage idea. Recently a South Jersey poultryman sent us a sample of soybean ensilage that had been preserved by molasses in eighteen semi-solid buttermilk barrels. The silage was of very good quality and he reported that his poultry relished the green roughage. His plan is to preserve much more green material this year.

Hog growers and poultrymen have used tankage and meat scrap for a long time in their rations but the use of these materials in dairy rations was believed impossible due to the danger of off-flavors. At the New Jersey Station and at Kansas and some other stations results indicate that these animal products may be safely fed in amounts up to ten per cent of the total ration. Our results show that animal products will not cause off-flavor or a decrease in either milk production or percentage of fat. There are times when a unit of protein in animal products is cheaper than a unit of protein in vegetable products.

Cod Liver Oil.—Quite often we receive inquiries regarding the value of cod liver oil in cattle feeding. Recent results of research at the Virginia and Iowa Experiment stations and at our New Jersey Station show that to supplement a normal calf ration with cod liver oil is of no benefit to the calves. At the Virginia station a normal ration of four-parts corn meal, four-parts oats, one-part linseed oil meal and one-part bran was fed with good quality hay. With this ration the calves received 20 cubic centimeters of cod liver oil daily until they reached a weight of two hundred pounds at which time the oil was increased to 30 cubic centimeters daily. When we feed calves a ration lacking in the essential vitamins then, of course, cod liver oil may be of benefit. At the Cornell Station, Dr. Maynard has recently shown that calves are much less susceptible to muscle dystrophy from cod liver oil than are goats and sheep. While no gross evidence of muscle dystrophy was found in calves, micro-

GRAIN & FEED JOURNALS Consolidated

scopic evidence of mild effects were found upon examination of muscles of calves receiving .7 grams per kilo of weight.

In some sections roughage is a problem right now, and will grow more acute until about May 1 to 15. The Wisconsin station reports that oat mill feed as a substitute for hay was worth in feeding trials, 95 per cent the value of U. S. No. 1 timothy hay and fully 70 per cent the value of high quality alfalfa hay. Comparative prices of hay and oat feed will have to determine whether a dairyman buys hay or oat feed.

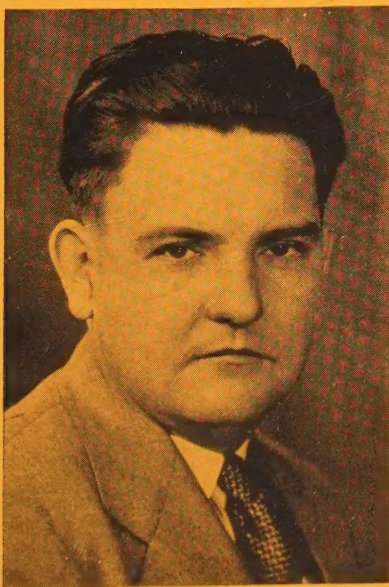
Vitamin G.—Another problem of the poultry industry which may interest a number of this convention is that which deals with a factor necessary for the growth and development of the chick. I refer to that which some scientists call vitamin G. It is a substance which is found in milk, green roughages, vegetables and a few other sources. At the present time Bordens are selling a dried skim milk that has been reinforced with the growth factor. The Kraft people are putting out a whey product that carries it and the Anheuser-Busch Co. is co-operating with one of our colleges in studying a yeast product which is supposed to support growth.

Vitamins D and G in Turkey Feed

By Professor J. E. HUNTER of Pennsylvania State College

The vitamin D requirements of turkeys have been determined with a fair degree of accuracy. Growing turkeys require at least twice as much vitamin D as growing chickens or about the same amount as required by laying chickens. Growing turkeys fed an all-mash ration should receive in a ton of feed that amount of vitamin D supplied by adding 20 lbs. of an oil meeting U.S.P. specifications for vitamin D. An oil to meet U.S.P. specifications for vitamin D must contain at least 85 U.S.P. units of vitamin D per gram. If an oil higher in potency is used, the amount required to give satisfactory results can be calculated on the basis of its vitamin D potency.

It is only recently that vitamin G requirements of turkeys have been investigated. Cornell workers in a preliminary report state that for the first four weeks, turkey rations should contain a minimum vitamin G equivalent of about 16% dried skim milk. They further state that for the second four-week period the vitamin G requirement drops to the equivalent of 10% dried skim milk. After eight weeks of age the vitamin G requirement is not greater than the equivalent of 7% of dried skim milk.



Dr. J. E. Hunter, now director of biological research for Allied Mills, Inc.

That does not mean that the amounts of milk as stated above must be added to the ration. Other ingredients besides milk carry the G factor to some extent and their potency can be calculated on the milk basis. The following table gives the relative vitamin G potencies of various ingredients in terms of dried skim milk. Milk is given the arbitrary rating of 100.

Dried skim milk	100
White fish meal—Vacuum dried	50
Flame or steam dried	25
Sardine fish meal—Domestic	45
Asiatic	25
Menhaden fish meal	25
Soybean oil meal	20
Corn gluten meal	0
Meat scraps, 50% protein	30
Wheat middlings	10
Wheat bran	10
Corn meal	5

By using the above table it is a simple matter to calculate the vitamin G equivalent of a

mash in terms of dried skim milk. Take soybean oil meal as an example. From the table it is seen to contain only one-fifth as much of the G factor as does milk. Obviously, therefore, if 200 lbs. of soybean oil meal is used in a ton of feed, it would supply the same amount of vitamin G as 40 lbs. of milk supplies. It must be kept in mind that the figures for the above table are averages and that some samples of ingredients may run below and others may run above the values stated. In calculating the vitamin content of a mash it is always advisable to err in the direction of an oversupply rather than an inadequate amount.

Hearing began Mar. 10 at Kansas City of the suit by the Board of Trade to restrain enforcement of the Commodity Exchange Act.

Truck Loads to Bushels 6,600—17,590

Direct Reduction Grain Tables

Reducing Weights to Bushels of 48 Pounds for Barley, Buckwheat and Hungarian Grass Seed

Weight (Lbs.)	Barley	Buckwheat	Hungarian Grass Seed
6,600	137.5	137.5	137.5
6,700	139.6	139.6	139.6
6,800	141.7	141.7	141.7
6,900	143.8	143.8	143.8
7,000	145.8	145.8	145.8
7,100	147.9	147.9	147.9
7,200	150.0	150.0	150.0
7,300	152.1	152.1	152.1
7,400	154.2	154.2	154.2
7,500	156.3	156.3	156.3
7,600	158.3	158.3	158.3
7,700	160.4	160.4	160.4
7,800	162.5	162.5	162.5
7,900	164.6	164.6	164.6
8,000	166.7	166.7	166.7
8,100	168.8	168.8	168.8
8,200	170.8	170.8	170.8
8,300	172.9	172.9	172.9
8,400	175.0	175.0	175.0
8,500	177.1	177.1	177.1
8,600	179.2	179.2	179.2
8,700	181.3	181.3	181.3
8,800	183.3	183.3	183.3
8,900	185.4	185.4	185.4
9,000	187.5	187.5	187.5
9,100	189.6	189.6	189.6
9,200	191.7	191.7	191.7
9,300	193.8	193.8	193.8
9,400	195.8	195.8	195.8
9,500	197.9	197.9	197.9
9,600	200.0	200.0	200.0
9,700	202.1	202.1	202.1
9,800	204.2	204.2	204.2
9,900	206.3	206.3	206.3
10,000	208.3	208.3	208.3
10,100	210.4	210.4	210.4
10,200	212.5	212.5	212.5
10,300	214.6	214.6	214.6
10,400	216.7	216.7	216.7
10,500	218.8	218.8	218.8
10,600	220.8	220.8	220.8
10,700	222.9	222.9	222.9
10,800	225.0	225.0	225.0
10,900	227.1	227.1	227.1
11,000	229.2	229.2	229.2
11,100	231.3	231.3	231.3
11,200	233.3	233.3	233.3
11,300	235.4	235.4	235.4
11,400	237.5	237.5	237.5
11,500	239.6	239.6	239.6
11,600	241.7	241.7	241.7
11,700	243.8	243.8	243.8
11,800	245.8	245.8	245.8
11,900	247.9	247.9	247.9
12,000	250.0	250.0	250.0
12,100	252.1	252.1	252.1
12,200	254.2	254.2	254.2
12,300	256.3	256.3	256.3
12,400	258.3	258.3	258.3
12,500	260.4	260.4	260.4
12,600	262.5	262.5	262.5
12,700	264.6	264.6	264.6
12,800	266.7	266.7	266.7
12,900	268.8	268.8	268.8
13,000	270.8	270.8	270.8
13,100	272.9	272.9	272.9
13,200	275.0	275.0	275.0
13,300	277.1	277.1	277.1
13,400	279.2	279.2	279.2
13,500	281.3	281.3	281.3
13,600	283.3	283.3	283.3
13,700	285.4	285.4	285.4
13,800	287.5	287.5	287.5
13,900	289.6	289.6	289.6
14,000	291.7	291.7	291.7
14,100	293.8	293.8	293.8
14,200	295.8	295.8	295.8
14,300	297.9	297.9	297.9
14,400	300.0	300.0	300.0
14,500	302.1	302.1	302.1
14,600	304.2	304.2	304.2
14,700	306.3	306.3	306.3
14,800	308.3	308.3	308.3
14,900	310.4	310.4	310.4
15,000	312.5	312.5	312.5
15,100	314.6	314.6	314.6
15,200	316.7	316.7	316.7
15,300	318.8	318.8	318.8
15,400	320.8	320.8	320.8
15,500	322.9	322.9	322.9
15,600	325.0	325.0	325.0
15,700	327.1	327.1	327.1
15,800	329.2	329.2	329.2
15,900	331.3	331.3	331.3
16,000	333.3	333.3	333.3
16,100	335.4	335.4	335.4
16,200	337.5	337.5	337.5
16,300	339.6	339.6	339.6
16,400	341.7	341.7	341.7
16,500	343.8	343.8	343.8
16,600	345.8	345.8	345.8
16,700	347.9	347.9	347.9
16,800	350.0	350.0	350.0
16,900	352.1	352.1	352.1
17,000	354.2	354.2	354.2
17,100	356.3	356.3	356.3
17,200	358.3	358.3	358.3
17,300	360.4	360.4	360.4
17,400	362.5	362.5	362.5
17,500	364.6	364.6	364.6
17,600	366.7	366.7	366.7
17,700	368.8	368.8	368.8
17,800	370.8	370.8	370.8
17,900	372.9	372.9	372.9
18,000	375.0	375.0	375.0
18,100	377.1	377.1	377.1
18,200	379.2	379.2	379.2
18,300	381.3	381.3	381.3
18,400	383.3	383.3	383.3
18,500	385.4	385.4	385.4
18,600	387.5	387.5	387.5
18,700	389.6	389.6	389.6
18,800	391.7	391.7	391.7
18,900	393.8	393.8	393.8
19,000	395.8	395.8	395.8
19,100	397.9	397.9	397.9
19,200	400.0	400.0	400.0
19,300	402.1	402.1	402.1
19,400	404.2	404.2	404.2
19,500	406.3	406.3	406.3
19,600	408.3	408.3	408.3
19,700	410.4	410.4	410.4
19,800	412.5	412.5	412.5
19,900	414.6	414.6	414.6
20,000	416.7	416.7	416.7

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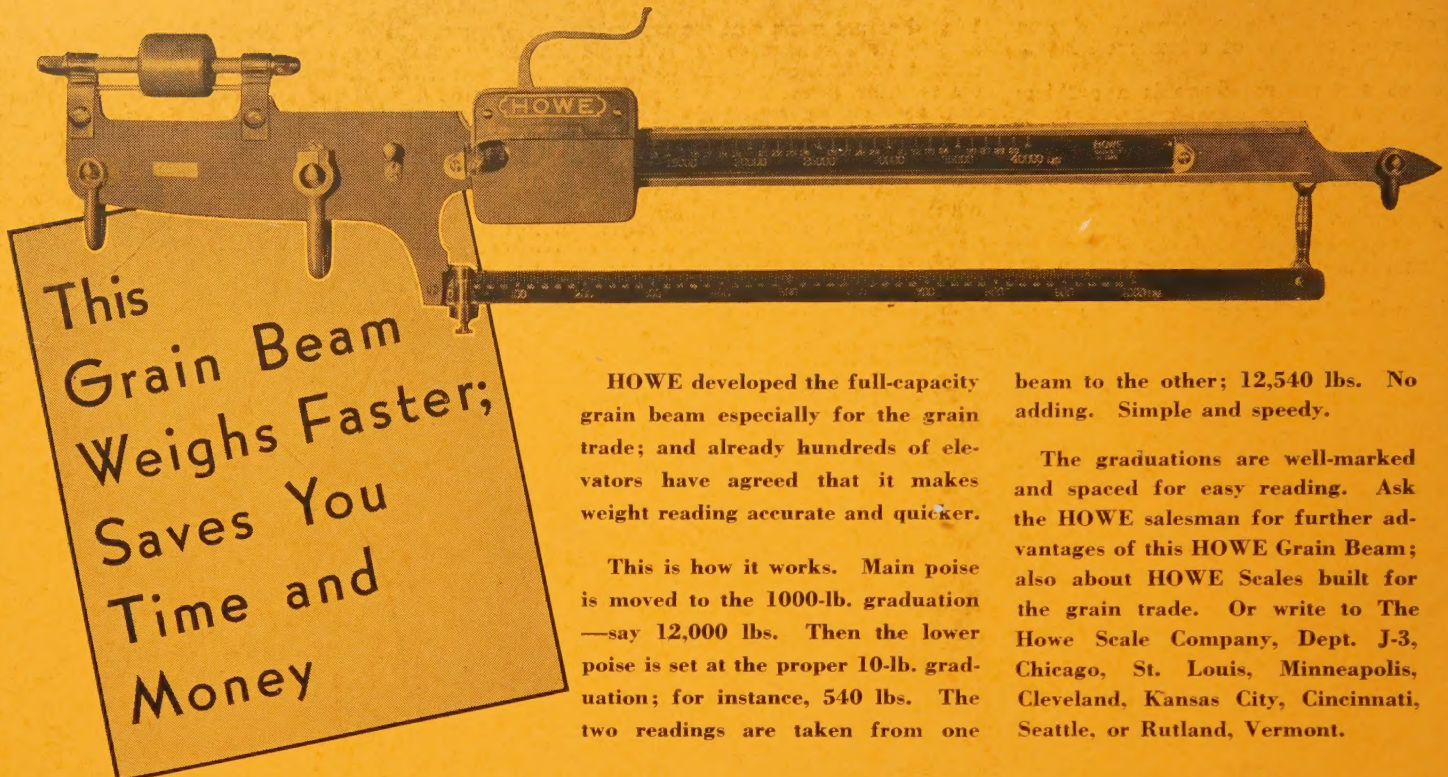
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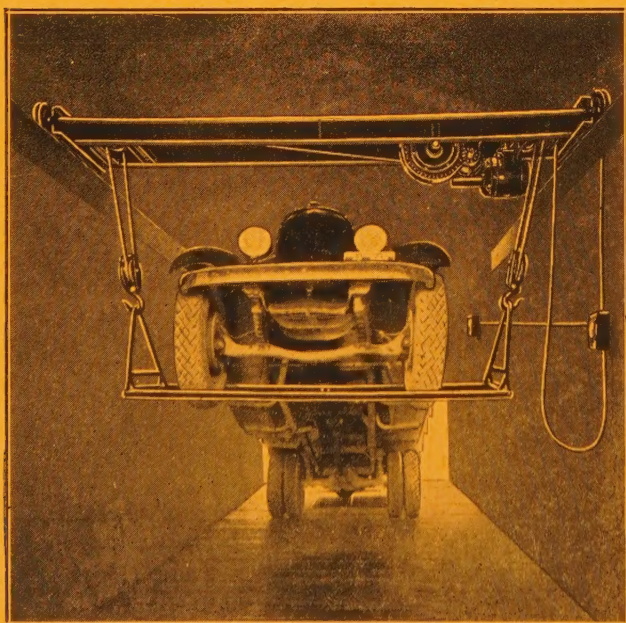
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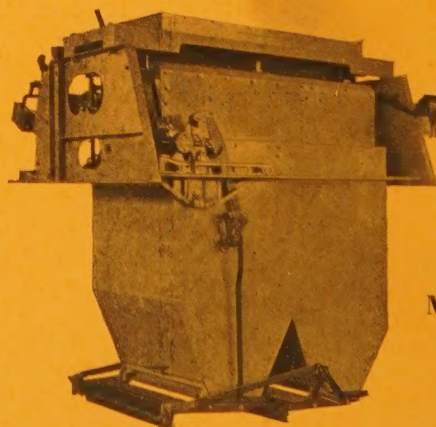
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